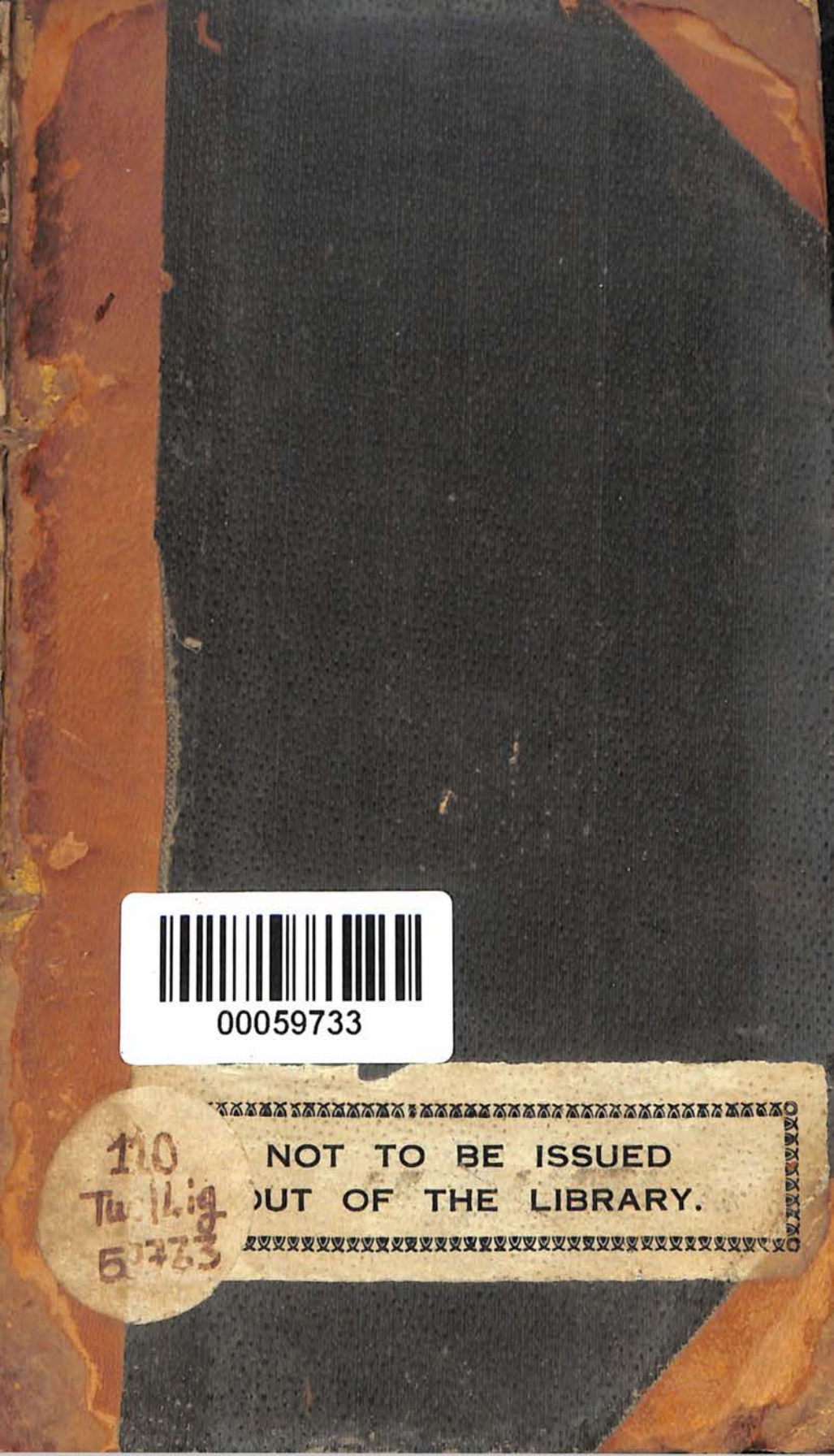

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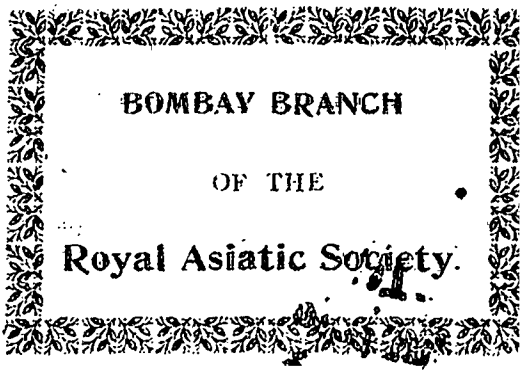

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THE

LIGHT OF NATURE

PURSUED,

BY

ABRAHAM TUCKER, Esq.

Second Edition,
REVISED AND CORRECTED.

TOGETHER WITH

SOME ACCOUNT

59733

OF THE

LIFE OF THE AUTHOR,

BY

SIR H. P. ST. JOHN MILDMAY, BART. M. P.

VOL. III.

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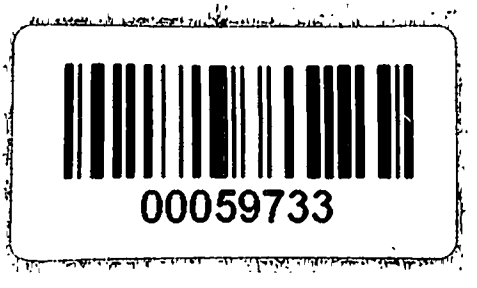
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THE

LIGHT OF NATURE

PURSUED.

CHAP. I.

SUBSTANCE.

HITHERTO I have proceeded only upon a view of human nature and the things we are daily conversant with; in order to frame some rules for our conduct, as well in the prudential management of our powers with regard to our own interests, as in joining our mutual endeavours towards promoting those of one another, whereby we may render life more comfortable and happy. But as I proposed in my general introduction to examine the foundations both of Religion and Morality, the Reader may think himself dissappointed in that, after having attended me through so large a portion of my work,

he finds me amusing him with one of them alone without mentioning a single word of the other, and that in such manner as to leave it grossly defective at the conclusion. I am now going to satisfy him in this particular, by which, if pursued with tolerable success, he may expect I shall be able to restore morality to that completion whereof he thinks I have defrauded her.

Let us now therefore, enter upon a careful examination of what other principles may be found besides those we have already collected, and push our researches beyond the scene exhibited by our senses and our experience. And as this attempt will lead us to take a view of external nature and things invisible, or which can be discovered only by the eye of reason, we shall have an ample field to expatiate in, distant objects and extensive prospects to contemplate, no less than universal Nature, comprehending things visible and invisible, with the connections and dependencies running between them, so far as the feeble optics of human understanding can reach to discern them. In the progress of this task I must learn to handle the telescope, the vastness of whose scenes may demand as close an attention to view them distinctly as our minute observations of the microscope have done before. For the objects we are ordinarily

ordinarily conversant amongst lie within a certain compass of magnitude: whatever greatly exceeds or greatly falls short of the sizes familiar to our acquaintance, carries a strangeness and unwieldiness forbidding and irksome to those who read for amusement only. The description of them must not be read but studied, and the describer can do no more than strive to make the study as little laborious as possible. But I cannot yet consent totally to lay aside the microscope, for I pretend to no extraordinary illumination nor direct intuition of things invisible, but can hope only to investigate them by the things that are seen: therefore, it behoves me to attend still for a while to minute objects, being desirous to lay the remainder of my foundation with the same exactness I have endeavoured at before.

2. But before we enter upon a view of external nature or proceed to investigate causes from their effects, in order to discover what powers or what laws there may be to govern the invisible world, it will be proper to consider whether we are likely to have any concern in their operation. For as Epicurus rightly observed, that what shall happen after we cease to exist is nothing to us, it will be superfluous to enquire into the sources of enjoyment or suffering in future times, until we

have satisfied ourselves that we shall stand in a capacity of being affected by them. Nothing is more certain than that this bodily frame of ours shall be dissolved in a few years; we daily see instances of its mouldering into dust or putrefying into corruption, so that we cannot flatter ourselves with its having a long continuance: but it has been made appear in our survey of human nature that the body serves only as a channel of conveyance to the mind, which is properly ourselves as being our sentient principle which perceives whatever is perceived by us, acts all that we do, and receives notices from external objects through the corporeal organs. So that our capacity of good and evil to come must depend upon the durableness of the mind: concerning which we can know nothing from sense or experience, for they inform us not what becomes of the mind upon dissolution of the body, we do not see it moulder and putrefy like that, yet neither do we see it give any signs of life or existence; nor can we learn any thing from the testimony of others concerning the inhabitants of that country from whose bourne no traveller returns. Therefore, we must endeavour to gather by deduction of reasoning from such observations as experience has afforded us, what is the constitution of the mind and whether

whether it be of a lasting or a perishable nature. I do not forget that we are taught to believe a resurrection of the body, and that some have maintained that the mind although naturally perishable, may be preserved in Being by the agency of a superior power. I would not be thought to reject either of those opinions, but it is obvious that the consideration of them cannot fall within the compass of my present plan: for none ever attempted to show by the mere light of reason, either that the body shall rise again, or that the mind, if corruptible in itself, shall be continued longer than the term assigned her by nature. Wherefore the nature of the mind is the thing to be enquired into: and all who have examined this point, seem agreed to resolve it into another, namely, whether the mind be a compound made up out of several materials, or a pure simple substance without parts or mixture.

For it was admitted on all hands, that whatever was generated may be corrupted; the productions of nature being only so many various assortments of matter united together by the mutual action of the elements upon one another, as that action never ceases to operate, it must of course destroy what itself had produced: so that the forms of bodies whereon their essence depends continually change and fluctuate;

fluctuate; what is one thing to-day becoming another to-morrow, and a quite different the day after. Those therefore who would shorten our existence to the period of human life, proceeded upon a supposition that the finer parts of the elements, united properly together in a certain organized structure, might produce an animal endowed with life, sense, and motion; that the degree of sense depended upon the greater or lesser nicety of this organization; and that thought and reason could not subsist out of the human form. So they held that the mind itself was nothing else beside a curious assortment of elementary particles ranged together after a particular manner, or a harmony resulting from the nice order and mutual congruity wherein they were disposed. This being laid down, it would follow incontestably that the laws of nature, which have brought those elements into the order wherein they stand, may as easily separate them again, and divest them of that sense and reason they had acquired by their contexture: in which case the mind must be destroyed upon dissolution of the body, nor can the harmony subsist after the strings that gave the notes composing it are broken asunder. From whence they justly inferred that the end of life must be the end of being, and that we can have no concern

with

with any thing that shall happen after our decease.

3. Those on the other hand, who would extend our duration beyond the present state, generally set out with showing the absurdity of imagining that any combination of senseless matter could produce sense and reason, which must be primary qualities belonging essentially to the subject wherein they are found, and not resulting from any others. They insist that Mind is a kind of fifth element, different from the other four, not producible out of them, and totally dissimilar from that first matter, whether water, or fire, or atoms, or whatever else can be supposed, whereout the elements themselves originally sprung: that being no production of nature, it is not destructible by any law or power of hers: that when united to body, it does not inhere therein as an accident or modification, but is joined thereto as a distinct substance, and may be separated again without losing its existence. They conceive that upon such separation, it may perform its proper functions better and freer than while encumbered with flesh: or if it should become incapable of exercising its powers, it will nevertheless retain the powers themselves, and continue capable of being united to another organization, which may prove equally fitting for

for its purposes with that it now inhabits. From whence they as justly infer that death is not an end of Being, but at most only a suspension of sense: therefore it behoves us to carry our thoughts beyond this present state to what shall happen hereafter, as being matters wherein we ourselves may have an actual concern.

4. This question then concerning the simple or compounded nature of the mind, I am to begin with: but before entering upon the discussion, I conceive there is something to be done preparatory thereto, for ascertaining the terms we must employ, without which we cannot proceed with exactness in our reasonings; and as our ideas of compounding seem a little variable and undetermined, I shall begin with endeavouring to settle what is to be understood by the terms Composition and Substance.

5. I have met with people who pretend they have no idea of substance, because they cannot comprehend a naked substance divested of all its accidents: they want to see one taken out from its qualities, and laid upon a table for them to push about and examine, like the spring of a watch taken out from the work. But this is a most unreasonable expectation, for though I see no impossibility there may be a substance devoid

of

of all qualities whatsoever, it is not at all probable there should, because it could be of no use either to itself or any thing else: yet if there were any such we could never know it, for substances discover themselves to us only by their qualities, and those qualities are as irrefragable an evidence of their existence as we could have were we able to discern them without. What we term qualities, as Mr. Locke observes, are powers of affecting us, or of causing alterations in other substances making them affect us differently from what they did before: thus whiteness in snow is the power of affecting us with the sensation of white, heat in fire is the power of affecting us with the sensation of warmth, and of melting wax, whereby it is made to exhibit another appearance than it did while cool and hard. But an act of power is the operation of some agent, of which therefore it gives as full evidence as of the power thereto belonging; for there cannot be power with nothing to exert it. So that naked quality is no more comprehensible than naked substance, and you might as well undertake to lay a substance devoid of quality upon the table as to lay whiteness, squareness, softness, coolness, without laying something white, or square, or soft, or cool: now if this assertion be intelligible, as I presume it

is,

is, you must have an idea of every term employed in it, and consequently of the word Something, if then there be a meaning in the word, you may take that for your idea of substance.

6. But the quality that most commonly gives us evidence of substance, is solidity, or tangibility, therefore the vulgar do not count those things substantial which they cannot feel compact in their hands, such as froth, vapour, smoke, light, odours, or the like: and they frequently conceive a production of substance, as in the growth of plants; or the destruction of it, as in burning wood, or evaporating water over a fire. But those who use ever so little reflection, know that our senses cannot in any manner be affected without an agent to operate upon their organs: we cannot see light without something striking upon our eyes, nor smell an odour without something entering our nostrils; we cannot perceive a smoke or vapour unless there be something floating about in the air to obscure it, nor discern the colours in a bubble unless there be something capable of refracting the light. They know likewise that our discernment of things, though an evidence of their being, is not an evidence that they began to be just when we discerned them: nor is the loss of that discernment an

evidence

evidence of their ceasing to be, but only of their removing beyond the reach of our senses. If I find my table dusty, I shall not think the dust a new production, but that it was flying about in the air before I perceived it, and is now only gathered into a thickness to make it visible: and if, on my return after going out of the room I find the table clean, I shall not suppose the dust absolutely destroyed, but only swept away somewhere out of my sight. So when I see a tree which I remember to have been a slender twig, there is no need I should imagine the great accession of substance a new production, but drawn from the earth, the air, or the clouds, wherein it lay dispersed and undistinguished: and when the tree is cut down and consumed in the fire, there is no occasion I should believe it reduced to the little substance of ashes left behind, but that the rest is dissipated in imperceptible portions in the same manner as before their coming into the tree. Yet when substances by their minute divisions are withdrawn from our observation, we still apprehend them possessing qualities had we senses acute enough to be affected by them: for we are ready to think that we could feel the smallest particles if we had fingers fine enough to take them up, and that if one were pressed ever so strongly on each side by

two

two others of equal bulk, it would keep them from coming into contact. Thus some qualities, especially those of resistance and solidity, seem to be inseparable companions of the substances we are ordinarily conversant with or exercise our thoughts upon; and all qualities, during their continuance, are inseparable from the substances whereto they belong, nor can be removed from them without being lost, for if you rub over a piece of paper with ink, the whiteness is not banished into another quarter but is absolutely destroyed.

7. This necessary connection of qualities with some substance makes them an evidence to us of its existence, for if there could possibly be whiteness without an object to exhibit it I could not conclude from seeing a whiteness that there is something white lying before me. This likewise may convince us that existence belongs solely to substance, quality having none of its own, being no more than a particular mode of existence in whatever possesses it. Not but that quality has a reality concerning which we are liable to mistake, for a child on seeing an evening mist rise out of a pond may take it for smoke and think the water must be hot: but what else is this than an apprehension that the water is so conditioned as that it will scald

him

him upon putting in his finger, whereas in reality the condition of the water is otherwise and would feel cold to the touch; so that the existence of coldness is nothing else than the water being in such a state as might affect our flesh with a sensation of cold upon being put into it. I am not unapprized that Plato supposed qualities might subsist without any substance to possess them, because while we can form an idea of them they may have a reality in our thoughts: but I beg leave to observe that our idea of a thing is not the thing itself, for one may remain after the other ceases, and may subsist though the other never had a being. I know well enough what the tooth-ach is though now quite free from it; I remember the transactions of yesterday, but the occurrences themselves are clean gone and over; I have a clear idea of a Cyclops, a Centaur, a Chimera, yet without believing there ever were such things in nature. Nor do I find other people backward in denying the reality of qualities they conceive readily enough: some in their melancholy moods, when put out of humour by egregious impositions, will insist there is no such thing as honesty in the world, they do not mean that they have no idea of it, but in their notion of its reality they refer to some substances possessing it, and you must understand them

saying

saying there is no man who possesses a principle of perfect honesty. Besides that the reality of a quality in one subject is not preserved by its remaining in others: the whiteness of this paper does not depend upon the whiteness of that, but would continue the same though there were nothing else white in the world besides; and if I blot it over, the whiteness of that particular paper is utterly gone out of all reality, though I should have ever so many sheets in my closet still unsullied and should remember ever so well how it looked before I spoiled it.

8. From hence it appears that identity carries another meaning when applied to substance than what it does when applied to quality, in the latter being nominal only not real: for though we currently say that two sheets of paper have the same whiteness, yet upon colouring one the whiteness of that is absolutely destroyed, the other remaining still unhurt, but it is absurd to suppose the same thing can subsist and be destroyed at the same instant. Nevertheless our uses deriving from the qualities of things, it concerns us chiefly to take notice of qualities; for which reason whatever continues to serve our uses in the same manner, we denominate the same thing notwithstanding any change of substance there may have been in it. Thus we count a river the same

same although perpetually changing its waters, provided those waters be equally fit for our services in swimming, or rowing, or washing, or drinking. Here it is easy to see, that the identity of form only in the river, continues all along, the substance every moment varying: as on the other hand, if you mould a piece of wax with your fingers, it may become sometimes round, sometimes square, sometimes triangular, according as you fashion it, the wax being still the same. Therefore, there is a formal or specific, and there is a substantial identity; the former, when several substances stand so conditioned as to affect us exactly in the same manner, the other, when we are satisfied the substance remains the same, whether appearing under the same or various forms. Specific identity is a branch of the formal, being of those qualities which constitute its essence, adapt it for some particular uses, and gain it a particular name: thus the wax, while moulding into different figures, still is wax; but if laid long in a damp place where it loses its oyliness, the essence of wax is gone, and it becomes dirt or some other kind of thing, yet substantially the same it was before. As we can know substances only by their qualities, if we have a dozen eggs in all respects similar which we would distinguish apart, it is common to mark

mark them with No. 1, 2, 3, &c. in order to know them again severally, after being taken out of our sight: for this reason, I suppose, substantial is often called numerical identity, as a synonymous term. Substantial or numerical identy cannot be lost, though we may not know where to find it, for one substance cannot be changed into another, but must always continue the same it ever was; it can only succeed in the room of another, or assume its form upon that being removed to some other place: and though qualities be so far unchangeable as that squareness can never be roundness, yet are they perishable and producible; for when the wax is new moulded, the squareness it had is totally lost, not flown off to some other quarter, and the roundness substituted in its place, is a new production, not drawn from any fund where it had lain concealed before.

9. As to the unity of substances, that is not easy to be ascertained, for want of acuteness in our faculties which require numbers of them to affect us in any manner; for frequent experiments assure us, that all the objects we discern are composed of substances numerically distinct from each other, which when separated, are singly too feeble to touch any of our senses; we cannot see them nor feel them nor count their numbers, but are perpetually

perpetually perplexing ourselves with subtile questions concerning their infinitude. But though we cannot tell what is one, we may know what is many; for whenever we perceive distinguishable parts in an object, we may rest assured it contains as many substances as there are parts we can distinguish. If I have a gallon of wheat before me, I may pronounce that the gallon consists of so many substances as there are grains in the vessel, though I cannot restrain them to that number; because not knowing how many dusts of flour or particles of bran, all of them distinct substances, lie in each grain: and if I pitch upon some particular grain, and then shake the vessel I may still remain satisfied that my grain is somewhere among the rest, numerically the same as when I took notice of it, and not changed into any other, though I cannot now find it again. Or suppose the wheat sent to mill, the flour kneaded into dough, then baked into bread, and the bran all employed to stuff pin cushions: I cannot doubt that the substance of my grain, although altered in form, and dispersed indiscriminately among that of the other corn, still subsists undiminished in the meal, the bread, and the cushions, and that all together contain at least the same number of substances as there were grains in the gallon, besides an accession

of others in the water, the yeast, and silk coverings to hold the bran. And as the corns in the gallon, and particles of flour or bran in the corns, have each a distinct being and existence of their own, independent on the rest, and which receives no increase by their junction; hence it seems to follow that the gallon has no other existence than that of the corns, and the corns none other than that of the flour and bran composing them; that nature has made all things in individuals, and though we cannot tell whether what we commonly term so, consists of finite or infinite parts, yet that it must derive its existence originally from single substances, how many soever there be that enter into it.

10. I have observed before, that though qualities are our sole evidence of the substances possessing them, yet we do not imagine the substance destroyed upon losing its qualities: in like manner though the operations of qualities upon ourselves, or upon other substances, when we can perceive them, are our sole evidence of their reality, yet we apprehend the qualities more permanent than their operations, and not lost when they cease: for, if I take a snow ball into my hand, I shall be satisfied of its coldness by my sensation, but if I throw it out upon the grass where I no more feel it cold, nor perceive its effects upon any

any thing else, nevertheless I shall still remain persuaded it retains the quality of coldness; but if I put it into a saucepan over the fire it will lose its specific essence, being turned into water, and may exchange its quality of freezing for that of scalding. Hence it appears there are qualities which a substance may assume or lay aside according to the texture and position of its component substances or motions among them, and these we term secondary qualities: others which we conceive inseparable from all substances falling under the observation of our senses, whether single, or in junction with others, such as solidity, impulse, and mobility, and these are called primary qualities. Which primary qualities are a necessary foundation of the others, for without solidity a knife could not have the quality of sharpness to force its way into whatever we employ it to cut; without motion and impulse the lucid darts of day-light, as Lucretius calls them, could not affect our optics with colours; nor could bodies discover to us their figures without resistance to our touch or force to throw off the light in a particular manner upon our eyes.

CHAP. II.

COMPOUND SUBSTANCES.

WHOEVER will consider the idea of composition a little attentively must perceive it to be a particular manner of juxta-position, and to contain several species under it, as joining, coalescing, mixing, incorporating, and the like. But every bringing of things together does not form them into a compound: if I bespeak a table of Hatchet, the carpenter, which I will needs have him make up in my presence, he prepares the materials at home and brings them all together in a hand basket; but I do not conceive them in that position to be any thing until he has joined the several parts properly to one another, and then I look upon the boards, the legs, the hinges, the screws, the glue, and whatever else he has put among them, as one thing, which I call a table. So when the cook brings out her flour, her suet, her sugar, her raisins, they still are but what they were before though laid ever so close upon the dresser; nor do we even then consider them as single things but call them heaps or parcels, which are nouns of multitude,

until

until she has mingled them well into one mass which then becomes a pudding.

2. In like manner nature forms her productions out of materials collected from the elements, but with this difference, that as she works in a finer manner than art can imitate, we seldom know the ingredients she uses until they appear in the composition. Thus the particles constituting a plant could not be distinguished whilst they lay mingled in the mould, the water, or the air, nor do we perceive the sources at all diminished from whence they were drawn, wherefore we are vulgarly apt to regard them as new beings not framed out of any others. Sometimes indeed we may know partly what are the ingredients employed, as when a farmer enriches his ground with manure; but then the manure must be divided by putrefaction into imperceptible parts before it be fit for nature to work upon. Nevertheless, it is universally agreed by all men of thought and consideration that the substance of every thing we see produced was existing before, and is only brought together into that form and order which renders it the object of our notice.

3. Nor does the mind want a power of compounding things that nature has not joined, or of making arbitrary junctures for which

which she has given no foundation; as a flock of sheep, a nation of men, a parish, or a bay. For the sheep of a flock, or men of a nation have no more natural connection with one another than with those of any other drove, or country, the lands of a parish lie as closely contiguous to those of the next as they do to any lands of the same, and the waters of a bay are as much mingled among the waters of the ocean as they are with one another: yet we consider each of them as one thing and call them by names of the singular number.

4. Thus we see compounds produced three ways, by nature, by the hand of man, and by the imagination; and all three proceed in the same manner, to wit, by selecting materials from the funds where they are to be had and placing them together so as to strike our observation as one object. Nevertheless they proceed differently in this respect, that the two former make a real change of position in the things they compound, whereas imagination can work only upon its own ideas, throwing them into a particular order or combination, without actually removing any thing from its place. But all composition, whether actual or mental, bears a reference to the thought, for the essence of things depends upon the uses we have for them, the proper-

ties

ties we observe in them, or the manner wherein they affect our senses: therefore we conceive them to remain the same so long as they continue to exhibit the same appearances, how much soever the component parts may be shifted: thus we esteem the Thames the same river we saw last year although the waters of it have been changed a thousand times. Nor do we consider every thing as entering into a compound if it does not answer our purpose so to do, although joined as closely as those we call constituent parts: if while Hatchet makes up the table he carelessly drops a spoonful of glue which fastens a chip to it; or if while our backs are turned an unlucky boy screws a piece of deal upon one of the leaves, we do not reckon the chip or the deal a part of the table. So neither do we esteem an oak apple as part of the tree, but an excrescence, although adhering as firmly to the leaves as they do to the branches. We say oil will not incorporate with vinegar; because after shaking them ever so long we can still distinguish them floating amongst one another: but water, arrack, orange juice, and sugar, compose punch, which we reckon a new production, because it affects our senses with a taste and appearance the several ingredients had not before. The blood, humours, and fat in our bodies, seem

seem to enter into the composition of them; but not the breath in our lungs nor victuals in our stomachs; because we perceive these continually coming and going; but we do not see when the others fly off or are renewed. Nature unites nothing, not even the strongest of her works, any otherwise than by holding the parts of them firmly together. It is now I think generally agreed among the learned that that quality of bodies called the attraction of cohesion, which keeps them united, is the effect of a certain subtile fluid pressing strongly against them on the outside: so that if a carpenter setting an upright post to support a floor, upon finding it too short should drive in a plank between the post, the plank, and the beam above, although manifestly distinct from one another, would be as truly united as the parts of iron, marble, or other the most compact and durable substances.

5. But it seems this subtile fluid, which makes the particles of matter cohere so firmly when pressing them on the outsides, if it can get between them, rends them as forcibly asunder, whence proceeds their elasticity; so that the heaviest bodies, upon having their parts dissipated beyond their sphere of attraction, may become the lightest: and Sir Isaac Newton supposes air itself generated this way out of metals and minerals. Thus all production

duction is no more than an assortment of minute bodies, imperceptible before, in such manner as to render them discernible; or else throwing them into new forms from whence shall result qualities they had not in their former state: and all destruction no more than a dissipating of them again, or else such a change of their contexture as shall divest them of the qualities they had by their first union. And it depends upon our customary manner of conception and the use of language to determine what shall be deemed a change of one thing into another or only a circumstantial change of quality in the same thing. Cream beaten into a certain consistency by churning produces butter, but upon the same consistency being destroyed by melting it continues butter still, unless the careless cook, thinking of her sweetheart, should let the saucepan stand over the fire, for then we say it is turned into oil. So butter kept to be sour still retains its essence; but dough grown sour makes leaven, and well baked becomes bread, though raw beef well roasted is nothing more than beef as it was before. What is it forms the stars into constellations besides the consent of astronomers? and that upon an apparent only without a real juxta-position; for the stars of each constellation lie at immense distances from

from one another, and probably some of Aries may stand further apart from others of the same sign than they do from those of Libra in the opposite hemisphere.

6. The more closely we consider the nature of compounds the more fully shall we be convinced, that how much soever they may change and vary, there is nothing new in them beside their order and situation and the properties arising therefrom; and that they are nothing but collections or numbers of things brought together so as to affect us in a different manner from what they did when separate, or joined into one idea by the arbitrary power of imagination. It is this collectiveness of compounds that enables us to divide them, and furnishes us with the idea of whole and parts, which being relative terms cannot subsist without their correlatives: for nothing is a whole unless as it contains all the members necessary to compleat it, and nothing a part unless in reference to other parts among which it is to be numbered. Every compound must have some quantity, and all quantity may be expressed by numbers, which alone renders it divisible; for nothing beside numbers is capable of being divided; but they being combinations of one another and ultimately of units, may either in fact or thought be separated into

into them again. But what perplexes this matter is that arithmeticians understand by dividing a separating into equal parts: but there may be an unequal as well as an equal division, twenty may be parted into nine and eleven as easily as into two tens, or into three, four, six, and seven as into four-fives; and in this sense there is no number indivisible until you come to unit; lower than which you cannot go, for one cannot be divided. I know we often proceed to fractions supposed to express less than unit, but in this notion we impose upon ourselves by shifting our ideas and considering that as a multitude which before we considered as one; therefore we cannot make a fraction without multiplying first before we divide. He that would part a sum of money into several shares proceeds first to see how many pounds belong to each, if there be a remainder he multiplies it by twenty to find the shillings he shall allot beside, and so on to pence and farthings; if there still be a remainder and he would be very exact, having no lower denomination of money to reduce into, he makes an arbitrary coinage in his own mind and supposes his farthings to contain so many pieces as there are shares into which he would distribute them, which he sets down for the denominator of his fraction: so a farthing

with

with him is no more an unit than a pound was at first; nor is seven-thirteenths of a farthing less than an unit, any more than three-pence or seven shillings, which every body will allow to be whole numbers.

7. Hence and from what has been said in the last chapter may be gathered that composition works a different effect upon qualities from what it can do upon substances: for quality having no existence of its own, but being a particular manner of existing in substances, it is easy to conceive how the manner will vary according to their various coalitions, and that they may acquire powers of affecting us which they had not while single, which will then be new productions having no reality before. This experience testifies, for things invisible when separate may become objects of sight by being brought together in numbers: the vapours in a clear sky we see nothing of, but when condensed into clouds we discern them plainly enough; if you bring up a bottle of wine out of a cool vault in a hot day, though the air appear clear you will quickly perceive a dew gather upon the glass. Qualities mingled together may generate a new quality different from all its constituents: blue and yellow will make a green: all the variety of colours we behold are supposed to be only various combinations of the seven primary,

primary, yet you cannot possibly tell which of them, nor in what proportion go to form a brown: whiteness has been demonstrated to arise from the joint action of all the seven operating equally upon you, yet the idea of white contains nothing of other colours as component parts. Position likewise will give substances a form which they had not singly; I may place a number of shillings so as to make a square, the shillings themselves still continuing round; here then squareness has a reality in the number and roundness in the several pieces: so there is no absurdity in a compound having forms and qualities of which the component members are destitute. But this holds good only with respect to secondary qualities which are producible and perishable, as the primary are not; for a solid body cannot be made up of unsolid materials, nor a moveable body of those that are incapable of motion. Therefore forms, qualities, and essences, are producible by composition, destructible by dissolution, and interchangeable among one another by the various stationing of the materials composing them: but with substances the case is otherwise, for however dispersed, or gathered together, or however variously placed among one another, they continue always numerically the same, without increase or diminution of their numbers,

bers or of their quantity, without transubstantiation of any particular one into any other that was not of their number before. A pint of water is the same quantity whether lying in a bason, or evaporated in steam, and if there were five millions of particles in the vessel, there are still the same identical five millions floating about in the air: it is not now water, but still is substance, having lost its essence but not its existence. Or if you suppose each aqueous particle to consist of infinite parts, which might then be separated to infinite distances, yet in their dispersion they would be the same quantity and number of substances, be it finite, or be it infinite, as while collected in the particle: for it is inconceivable that nature can ever lessen or add to the number of substances she has already in store, she can do no more with them than congregate, or dissipate, or assort them variously, by changing their positions with respect to one another. But our business in common life lies solely with the qualities of things, not their substance, for so we find them convenient for our purposes, we need not care what substance or particular materials they are composed of. If a vintner gives me the taste of wine from a particular pipe in his vaults which I like, I may perhaps desire to have a parcel out of that very pipe, because doubtful

doubtful whether any of the others might please me so well: but if I could be assured he would send me wine of exactly the same quality and palatableness, I should not be solicitous to have it drawn out of that or a different vessel.

8. For this reason we ordinarily denominate things the same or different, according to their appearances or aptness for our purpose, and when we give them those epithets, we oftener mean specifically than numerically the same or different. Thus if I order my merchant to send me the same wine I had last spring, I can expect only wine conditioned alike; for I must know it is impossible he should send the very wine I have already drank out. Or should I bespeak a box of the joiner, which on coming home appears not shaped according to my orders, I may be apt to say, this is not the thing I wanted: if he carries it back, and afterwards brings me one exactly answerable to my intentions, I shall be content with it, as being the very thing I would have, yet without regarding whether he had made it up of the same materials with the former, reframed, or of fresh stuff, and if he tells me I shall not alter my opinion thereupon. Therefore it is very material, for having a just idea of identity and composition, to observe whether, when we use

use the word Same, we understand thereby the same thing, or the same sort of thing: in the case before mentioned of sending the same wine, it is plainly to be understood wine of the same kind, and when I say of the ill-contrived box, it is not the thing I wanted, my meaning must be that it not such a sort of box as will suit my purpose, for had it been constructed and worked to my mind, I should have been equally satisfied whatever pieces of deal or wainscot it had been made of. Cream churned into butter is still the same thing it was before, but a different kind of thing, and applicable to different uses: the human body is certainly a different thing in a full grown man from what it was in the new born infant, yet is counted all along the same body, because conveying sensations, and serving for an instrument of action to the same person. But the common language of mankind adapted to the common occasions of life, which require our attention to the kinds, the qualities, and uses of things, leads us perpetually to mistake essence for existence, specific for substantial identity, and the manner of being for being itself. Hence we look upon the production of a compound as a creation, and the change of a substance from one species into another as a transubstantiation: for, when a millwright has set up a windmill.

windmill, we suppose there is a new thing, a new being produced, because there is a new kind of thing, having properties wanting before, for now it will turn with the wind, and grind our corn, which the disjointed materials could not do: and upon salt being thrown into water, we think the salt has utterly lost its being, and a new substance produced which we call brine. Whereas anybody, with a little reflection, may see that the materials of the windmill retain the same existence when put together as while separate, making only a more serviceable kind of thing than while lying in confusion: and that the brine contains no more nor other substance than was in the water and salt when kept apart. So that all the operations of nature and art which have been performed in the preceding year, have neither added to the number of substances, be they finite or infinite, which were in being a twelvemonth ago, nor diminished, nor changed them, but only cast them into various kinds, exhibiting different appearances, and diversly answering our uses.

9. From all that has been observed above, I think it must appear manifest that existence belongs only to individuals, that whatever has a being of its own cannot be divided, and that a compound is no substance other-

wise than to our apprehension, but an aggregate of so many substances as the component parts whereof it consists. This will be seen plainer if we consider the incorporations made by men: if our sovereign lord the King embodies six hundred men into a regiment, to be called the royal volunteers, the regiment taken collectively is no real being, but a creature of the imagination: I do not mean to call it a mere shadow, for the brave fellows composing it have a real existence, and I doubt not will prove themselves effective substances in the day of trial, but the body has no other existence than what belongs to the men; if it had, there would be a power of creation by human management, for then, upon the incorporation, there must be six hundred and one beings instead of only six hundred there were before. In like manner the productions of nature, which are only collections of imperceptible particles into a perceptible form, add nothing to the number of beings, nor does any thing properly deserve that appellation, unless what is uncompounded and indivisible.

CHAP. III.

DIVISIBILITY OF MATTER.

But an objection may be thought to arise against the sole claim of individuals to existence, from the divisibility of matter, which according to the fashion at present prevailing among the learned, is held to be absolutely infinite. For it may be urged, that if all body consists of parts, those again of under parts, and so on for ever, we must either suppose with Dr. Berkeley, that the bodies we daily see and handle, are mere phantoms and ideas of the mind; or if we allow them a real existence, we must needs rest it at last upon something which is itself a compound; because, after infinite divisions we can no where find any thing which is not so. But it must be granted that infinite divisibility, as well as finite, has its difficulties; which, I believe, are gotten over principally by the definition generally given to matter of an extended substance. If you ask what is meant by the term extended, they tell you it is the having parts without parts, that is, extraneous to one another. Now for understanding this explanation we must

observe, that appearances, or ideas, may have parts within parts, coextensive together throughout the whole compound; thus our idea of a piece of gold, contains the ideas of weight, compactness, ductility, fusibility, with many others as parts thereof, and each of these is diffused equally through the whole piece: but when we consider its bulk and substance, the right side does not reach into the left, nor is the top diffused among the bottom; so that the substantial parts do not lie within one another, but each has its separate station. Thus to say that matter is divisible, because extended, amounts to no more than saying it is so because it consists of parts distinct, and removeable from one another: a pretty way of proving the point, being no better than the ladies' reason, it is divisible because it is.

2. It seems a more colourable argument, when our conception is appealed to, and we are defied to imagine any particle which must not at least have two sides distinct and distinguishable from one another. I may perhaps by-and-by accept the challenge, and attempt to show, that we do not always conceive of things as having two sides: but for the present, let us see what can be concluded from this argument, supposing the premisses assumed in support of it were true. It has been shown by

by Mr. Locke, and in our chapter on Reflection, that our ideas concerning external objects are originally derived from sensation, all we can do for ourselves is by repeating, compounding, associating, dividing, or extracting from what we have received by that channel. Nor is it certain we can form any conception of magnitude greater or less than what we have seen: we talk indeed currently of immense spaces, of millions of miles, of vortices and planetary systems; but our imagination keeps all the while within the same compass it would do if we were to contemplate any measurable portion of ground we could distinguish with our eyes. We proceed in the same manner a person would who should undertake to draw any plan assigned him upon a slate: if he be set to describe a garden, he marks the walks, the beds, the groves, the buildings, in their proper dimensions, so as that the whole may just fill up the space he has to delineate them upon; if a county, then spacious roads and wide rivers run in the place of walks, and you find towns occupy the spots where there stood alcoves before; if the terraqueous globe, the parishes are lost through their minuteness, and their room is taken up by mountains, kingdoms, seas, and oceans; if the solar system, he places a little ball in the middle to represent the Sun,

draws

draws the planets with their satellites rolling round at proper distances, and makes the orbit of Saturn touch the edges of his slate: thus when he is put to take in a larger space, he does not enlarge his draught, but contracts his scale, and lessens his figures to bring them within the limits to which he is confined. Just so it fares with imagination, whose scenes contain the same dimensions whether we contemplate larger spaces or smaller: we fancy ourselves climbing to immense heights, but in reality contract our objects to a conceivable size, and draw down immeasurable distances within the length of our own line: like Prior's squirrel in the tinman's shop, who seemed continually mounting up in his rolling cage, but never advanced one step higher beyond his own length.

3. Let us now invert the glass and turn our thoughts upon objects less than what ordinarily fall under our observation. He that would cut a hair as small as possible, may work a good while with a case knife by drawing the pieces doubled along the edge; when he has reduced them so small that they will not double, he may lay them upon a smooth table and cut a little longer with a penknife; after he has done what he can this way he may take a microscope and by help of that, make two or three cuts more with a fine lancet:

lancet: there is now no more room for manual operation, but if he will proceed further he must go to work with his imagination; which may chance to play him a sly trick he is not aware of; for, upon contemplating one of the little particles of his last division, he will find it grow into a magnitude having two distinguishable sides, which he can easily conceive separated from one another; but upon their separation, each will immediately grow again into the former size; and thus he may go on without end until he be tired of the sport. Hence it appears, that our imagination is hemmed in by certain boundaries on both sides beyond which it cannot pass; nor can we conceive things greater or less than certain dimensions, unless by diminishing or magnifying them, we can bring them to a size discernible by our senses; and that when we attempt an infinite division, we proceed without making any way, undoing as fast as we work, and only dividing what we had magnified ourselves: just as was shown before in the case of numbers, where we make a fraction supposed less than an unit, by the process of multiplication, how much soever we may fancy it dividing. Wherefore this argument drawn from our want of conception, seems inconclusive, it may convince us of a failure in our faculties, but proves nothing concerning the nature

nature and constitution of matter: for since there is a certain measure below which we cannot form an idea, since experience and reason assure us there are particles far within that measure, how know we what we might conceive, had we faculties piercing enough to discern them clearly?

4. Mathematicians tell us, that points disposed in a row form a line, that lines placed side by side make a superficies, and that a number of superficies laid over one another compose a solid. Let us try to anylize a solid into its constituent parts: we cannot by any contrivance actually take off a superficies without thickness; if we go to work with our imagination, after having detached the surface from the main body, we shall find it have an upper and an under side: endeavour to split the sides asunder, and suddenly you will find each of them by a kind of magic provided with a lining. The fault then lies in the imagination, which cannot perform what is desired of her for making the experiment; for those who hold the divisibility of matter surely must allow that every part may be separated from every other, but in all solids, there must be some parts lying uppermost: we only desire you to take off these, and not meddle with any thing else, but this it seems you cannot do, for you cannot separate

rate them without tearing up others clinging underneath. Thus our solids resemble a quantity of fine paper piled up in a stationer's shop, if you set a man with gloves on or a rustic whose hands are hard by labour to take off a single sheet, he will fumble about a long while and at last take up two or three together: so if we attempt to take off a superfices we cannot do our work neatly, but our clumsy-fisted imagination pulls up another adhering to it beneath.

5. Having so little success with superficies, considered by themselves, let us try what can be done with them in their state of junction with the main body. When one thing lies upon another, how porous soever we may imagine them, there must be some solid parts of each which touch, and those who contend that all body has magnitude, must admit that these pasts have superficies by which they rest upon others of equal size that support them. But not to perplex ourselves with such minute parts, since we are enquiring only into our conceptions rather than the reality of things, let us consider larger objects that we can easily comprehend: it is certain we may and do conceive of compact substances as of perfect solids, and therefore these will answer our present purpose as well as if they were truly such. Let us suppose then a six-inch cube

cube of glass perfectly smooth standing upon a well polished marble table, here we may conceive a superficies of six inches square that touches a like superficies of the table: but what does it touch? is it not real body? and must not that body be void of thickness? for none ever imagined that bodies could penetrate at all into one another. If you say this body must have an under side, that cannot be, for the under side will be a distinct thing from the body, one being touched by the glass and the other not, but the same thing cannot be touched and not touched at the same time. But this same individual body, individual I mean in depth, which touches the glass, must likewise touch some part of the table below, or else it would fall lower until it did: if you say again it touches only by the under side, then you make it a compound consisting of two parts, the uppermost of which touches the glass and nothing else, and so has nothing to sustain its weight with the weight of the cube above; and the undermost touches the rest of the table but nothing else, and so has nothing that it can support, nor any weight resting upon it. Wherefore there must be a number of superficies, each whereof touches both the next above and the next below, running on in continuity to make the thickness of the table.

Now

Now consider the surface covered by the cube as joining to the rest of the table's surface, that part which it touches on the right hand for instance you must acknowledge to be a body, and as it cannot be diffused or penetrate thereinto, what it touches must be a line without breadth or thickness. Consider again what this line touches of the further and hither parts of the table and we shall find them to be points, that is, bodies destitute of any dimension.

6. Some have questioned whether magnitude be really inherent in bodies or only an idea wherewith they affect us: I do not know how this matter can be determined with absolute certainty, for we can know nothing of bodies unless by our ideas, but if it be real we must suppose it to correspond with our idea, and every thing to be predicated of it, which may be predicated of that. Now though we must acknowledge that our idea of magnitude consists of parts, yet it is not necessary those parts should have a magnitude too; things may affect us with an idea by their united force when they could not do it singly. We know visible objects are compounded of invisible particles: and audible sounds made up of little motions in the air which cannot be heard: the watry vapours dispersed up and down in fair weather affect

none

none of our senses, but when condensed into rain we can both see and feel it; a single drop falls silently down, but when multitudes of them pour in showers we hear them patter against the ground: why then may not bulk and thickness be composed of what has neither? One is no number yet all numbers are made up of units, and two of them are enow to compose the lowest: we have observed before that all magnitude may be expressed by numbers, as of yards, inches, or fractions of an inch, and indeed is no more than a number of parts undistinguished from each other in the thought. Therefore, in things whereof we can perceive the parts singly, we reckon by number, as a hundred men, a thousand sheep, twenty guineas; where we cannot, we estimate by measure or magnitude, as a pint of water, a square yard of clay, an ounce of gold. Now we shall see this doctrine confirmed if we attend to the discourses of such as would prove the divisibility of matter, for you will find them always contented with number two to make a dimension: there is no line, say they, so short but must have two ends, no superficies so narrow as to be without two sides, and no solid so thin as not to have two surfaces; allow them two extremities and their conception does not boggle at any dimension without

without wanting a middle to compleat the idea. Then again, if we take our judgment from the scenes in our imagination, no body can be infinitely divisible, for infinites are the most inconceivable things we can turn our thought upon, and I defy any man to form a clear conception of an infinite number of parts in a mountain, or a province, a planet, or a sun.

7. But before I am entitled to give a challenge I must take care to acquit myself manfully in answering that I accepted a little while ago: let us therefore examine whether it be really true that we have no conception of a body without parts. When we look upon the wainscot of a room where the pannels are painted of a different colour from the stiles and mouldings, we do not take the objects we behold for fancies or delusions, but for something real and material, yet we conceive of the paint on the pannels as square substances utterly devoid of thickness: it argues nothing to tell me the paint must have some depth and that if I scrape off a little with a penknife I shall perceive a colour still lying behind, for our business is now only with our manner of conception which takes in nothing of the latent colour, nor do we apprehend our eye penetrating at all into the boards or the paint, but touching lightly upon

upon the surface. So if I see a carpenter draw a line with his lead pencil, perhaps I might easily discern a space between the sides if I looked for them, but this I do not, so the breadth does not enter into my idea of the line, which I conceive as a black substance (for I do not suppose it an apparition) extended only in length. Should I, upon hitting my pen against something, chance to dash out a few sparkles of ink upon my paper, I should see them plainly and apprehend them to be substances, yet might neither discern nor conceive any dimensions they had. What shall we say of the smaller stars? I do not deny them to be immense bodies much larger than this whole earth we inhabit, yet every common man who looks at them in the night conceives them as no more than points, and astronomers tell us that if they were brought a hundred times nearer than they are, we should not find them having any perceivable magnitude. So then, whether there be such things as points, lines, and surfaces, in nature or no, certain it is from experience that we have sensations and ideas of them.

8. Men of thought, like children pulling their playthings to pieces to see what is in the inside, endeavour to separate the objects striking their senses from the rest of the body

body whereto they belong, in order to turn them round, and as it were handle them on all sides in their contemplation; but in so doing, as has been observed before, there constantly grows something more to what they so take off, reflection adding other ideas out of her own fund to those sensation had exhibited: so that a point, a line, a superficies, considered apart, is not what it was when lying in the body. Thus they deceive themselves, thinking to find dimensions in objects which have none: they do indeed find them in their idea, but then they find only what their own imagination had laid there just before.

9. The like may be said of figure as has been observed concerning magnitude, for the one cannot well subsist without the other, whatever has magnitude must have some figure, and contrarywise: but possibly neither may reside in bodies any otherwise than as qualities of affecting our senses in such a particular manner; therefore it is hard to say what figure belongs to things so immensely great or extremely small as to baffle all our methods of admeasurement. We are apt indeed to conceive of points and of infinite space as being round, and the Stoics confidently assigned that figure to the universe, but then where shall we place the centre? why always in that spot where we happen to stand

stand ourselves, because we can conceive no otherwise of immensity than by spreading our thoughts to boundless distances on all sides of us: but then this centre must move as we move, and according to the time when we make our reflection, whether in June or December, will stand a hundred and sixty millions of miles apart from itself. We imagine points round because we can conceive them equidistant from every part of a circle drawn about them, which we could not conceive of any other figure lying in the middle; but then the circle cannot be drawn within the point nor unless at some distance from it. So that our spheres of both sorts are incompleat, the one being a centre without a circumference and the other a circumference without any or with a moveable centre. In short, the notion of rotundity in these things seems grounded on the following syllogism. They must have some figure, but they cannot have any other besides roundness, therefore they must have that. The minor we may prove well enough, because in all other figures there must be angles or protuberances which we may conceive broken off and what remains only will be the point; and we may conceive the sides between those angles and protuberances swelled out, therefore the figure before such swelling was not immense. But the

the major we assume without any foundation, our faculties not being sufficiently acute to inform us with certainty whether there may not be bodies or spaces without any figure at all: thus much we may rest satisfied with, that we can neither conceive a sphere consisting of no parts, nor yet how finite parts can make up an infinite compound.

10. Upon the whole matter it seems too hasty a conclusion to pronounce that all body must have magnitude and divisibility because we cannot conceive of it otherwise: for we have produced instances of our seeing and conceiving bodies without sight or conception of their having all or any of the three dimensions required to make a solid; and if we cannot comprehend them apart in our imagination without dimensions, why should we presume that imagination is a competent judge in the case? For our ideas being all received originally from sensation, reason has no other materials to work upon besides those furnished by the senses; and the objects striking upon them, even when assisted by the best contrivances of art, are all undeniably compounds, so that we have no experience of any thing else whereon to ground our judgments. But had we senses piercing enough to discern that first matter whereof all bodies are composed, how know we what other

other appearances that might exhibit different from any we have ever yet beheld? which might enable us to understand what now remains inconceivable. Therefore the argument drawn from our manner of conception, which we must needs own imperfect, is scarce sufficient to overthrow that taken from the existence of body, which you can never come at until you get to something uncompounded: for a compound is not a Being, but a number of Beings, nor has any other existence than what belongs to the component parts. So then we must necessarily either admit individuals or deny all existence to body, and suppose it only an idea or phantasm of the brain. And that there are such atoms seems to stand confirmed by the current doctrine of cohesion wherein the strength of beams, bars, long stones and other solid bodies consists, enabling them to support heavy weights: for their parts are not held together by any cement or strings, but, as Sir Isaac Newton, and from him our modern naturalists suppose, by the external pressure of ether. Now let us imagine an iron bar sliced out into a multitude of plates as thin as paper and perfectly smooth: I do not say this can be done by art; but, if matter be infinitely divisible, the bar is certainly capable of being so divided and its length is actually

made

made up of such plates standing upon their edges side by side of one another, and it seems incredible they should be made to cohere so firmly, as experience shows they do, by a lateral pressure against the two outermost. You might easily hold up a quire of paper by pressing it with your flat hand against the wainscot, the same I suppose you might do with a ream, or perhaps two or three, only you must shove with both hands and all your might; but if you had glass plates, as finely polished as art could make them, to try with instead of paper, and enow of them to reach almost across the room, you would never be able to prevent the middle ones from slipping through between the rest, especially if you laid a parcel of boxes and trunks over them. Possibly you might contrive by means of strong screws to keep even this glass beam compact, because glass and all other the most finished productions of human industry still have some little roughness, which hinders their sliding down when very forcibly squeezed: but the plates composing our iron bar, were matter infinitely divisible, must be mathematically smooth, so that the greatest pressure could never make them cohere. Therefore we must conclude that the thinest plates, whereinto a beam or bar is capable of being divided, are not mathematical planes,

nor perfectly smooth surfaces, but have a roughness not separable from the rest of the plate, whereby when forcibly compressed they take hold of the like roughness in the next adjoining plates.

11. Nevertheless, as one must not expect to bring every one to the same mind upon so abstruse a question, I will desire those who still hold the infinite divisibility of matter to consider that infinity is an inexhaustible fund, and how capable soever matter may be of such division, it can never be effected completely. Let water, air, fire, or whatever causes you please, rend asunder the parts of matter ever so long, they can never reduce them to nothing, but their minutest divisions will still be body, having figure and magnitude: so that we must necessarily conclude there are particles in nature which, notwithstanding all the divisions they have undergone or may suffer hereafter, never were and never will be less than they are. Therefore the most obstinate unbelievers of individuality may without scruple admit the doctrine of atoms actually, if not potentially, indivisible, and that there is a Minimum below which, though bodies may be capable of being reduced, there is no power in nature that can reduce them: these then we may be permitted to take for our first matter whereout

out all the bodies of the universe are compounded.

12. I said at first that infinite divisibility of matter was the doctrine now in vogue amongst the learned, but upon second thoughts I believe I have misrepresented them, and the mistake arose from want of distinguishing between infinite and indefinite divisibility. For I have observed that men of sober judgment forbear to decide any thing concerning the former, which they own to be an unmanageable subject, too perplexing for the human faculties to determine either way: but concerning the latter, they unanimously agree that we cannot set any bounds to the division, nor assign the precise number of parts into which any given parcel of matter may be crumbled. If my notion of existence has persuaded me that nature must make a stop somewhere in her dividings, I shall not hesitate a moment to subscribe to the article of indefinite divisibility: for our thought knows no bound in the operation, nor does reason ever find an obstacle against contracting or extending her scale without end, in measuring the objects she would contemplate. This is enough to serve the purposes of mathematicians and naturalists, and less than this being not enough, I shall endeavour to confirm it by some observations which,

which, though a digression from my course for the present, yet will not be useless by-and-by, when I may have occasion to divide further than every body will let me. For there are people whom you can please neither full nor fasting; they will battle tooth and nail for divisibility at one time, and at another will not allow you to use the principles themselves have laid down, but if you go to spin finer than they have been accustomed to, cry out against it as an inconceivable absurdity. Now as in the progress of these enquiries I may be driven to a necessity of supposing very small bodies to contain a multitude of various and dissimilar parts, that I may not shock any body with an idea he might think quite out of the way if presented to him at once, I shall endeavour to prepare for its reception, by producing instances wherein little parcels of matter are actually divided beyond what is commonly apprehended possible.

13. Those who have gone upon the same undertaking, seldom fail to put us in mind of perfumes, which they say will send forth an odour for many years without losing sensibly of their weight; and of leaf gold, a single grain of which we are told will cover a wire of 1625 feet long so entirely as to leave no spaces open between.

But

But as the little corpuscles of light are probably the smallest bodies affecting our senses, I shall try to make some computation, though far within bounds, how many of them may be thrown off from a certain quantity of inflammable matter. I have been informed that a wax candle, of four to the pound, may be seen in a clear night at two miles distance: this then held up two miles high in the air, would diffuse its light throughout a circumference of four miles in diameter. Let us now consider how near the rays of light must lie to one another in this circumference, so as to be discernible in every part of it, and we cannot well suppose them further apart than one eighth of an inch, for else an eye moving gently to the right or the left would find intervals of darkness when it came between the rays; therefore there must be so many rays as there are square eighths of an inch in such a periphery, and we shall find them upon computation amounting to 354816000. But this is not all, for each ray probably consists of successive corpuscles continually following behind one another, and the business is to find out how many of these successions may proceed from some substance whose quantity is assigned. A candle of the size above mentioned will burn about six hours, therefore a grain of wax, reckoning

eighty

eighty pounds Troy to seventy-three Aververdupois, feeds the flame sixteen seconds. Now in order to discover how many successions of light must be sent out in that time, let us have recourse to the pretty childish amusement of making gold lace, spoken of at the beginning of our chapter on Reflection. Let a live coal be fixed upon a wheel, and upon turning the wheel a little briskly, you will see the coal draw a trail after it; as you encrease the velocity of the wheel, the trail will lengthen more and more. Let the motion be accelerated until the trail just closes into an entire circle, and then observe in what time the wheel performs its circumvolutions, for this will determine the length of a sensation: because it is plain the impression received by the eye from the coal at one point lasts until it comes round to the same point again, or else the circle would not appear compleat. We suppose the wheel to turn in this case (for I have never tried the experiment) ten times in a second: it will follow that an eye seeing the candle without discontinuance must have a fresh succession of light strike upon it in every tenth part of a second. But we have not done yet, for the circle made by the coal will not appear so bright as the coal itself when standing still, from whence we may infer that several successions, following

lowing one another before the effect of the former is worn off, are requisite to give us a perfect view of the objects we behold: we must think of some other contrivance to discover how many of these successions fall within the compass of a sensation. And for this purpose let a room be darkened excepting a long slit a quarter of an inch wide cut perpendicularly in the window shutter: let a large circular pasteboard be placed so as to turn very smoothly upon an axis laid horizontally upon a level with the bottom of the slit: cut a slit likewise of the same width in the pasteboard from the circumference to the centre; cause it to be whirled round with an even motion just ten times in a second, if that be found the length of a sensation, and place your eye directly over against the window, but on the opposite side of the pasteboard, by which means you will have no light but what comes through both the slits. In this situation I apprehend you will see light continually near the center of the pasteboard but none at a distance, because there the aperture will be too small to admit it. If you can observe exactly the limits between light and darkness, you may determine how many successions at least must follow during a turn of the pasteboard: for the rays having no admittance unless during that interval wherein some

some part of both slits fall in a line with your eye, in which time the pasteboard will have moved half an inch, the proportion this bears to the whole circle described by that part where you see the light terminate will give the successions falling within the compass of a rotation. Suppose for instance you can discern light so far as eight inches from the center, a circle drawn upon such a radius will measure fifty inches round and contains a hundred of those spaces the rays have to pass through: since then you still perceive them, you may rest assured they keep flowing in every hundreth part of a turn of the pasteboard, and if ten of these were performed in a second there must be a thousand successions following in that time. Therefore to find the number of corpuscles produced by our grain of wax, during its sixteen seconds burning, we must multiply the prodigious number before set down by sixteen thousand, which will give a produce of 56770560000000.

14. I have proceeded upon a supposition that the rays of light are not continual streams, but little balls or corpuscles following one another at certain distances: and if there runs out no more of them than a thousand in a second, the distance between every ball and the next behind will be a hundred

and

and sixty-six miles and two-thirds upon a calculation from the known velocity of light. Wherefore if you will imagine a ray to be an entire thread or string of balls touching one another, you must multiply the product we have already by as many balls as you can suppose lying within a length of a hundred and sixty six miles and two thirds. But this would be carrying the matter too far, for we learn upon the authority of Sir Isaac Newton that light is emitted by vibrations in the parts of luminous bodies, which vibrations can act only at intervals in that part of their swing when they are moving outwards and not when they are returning, wherefore the matter they throw off cannot flow in a continual uninterrupted stream. Nevertheless, we may find several reasons making it probable that we ought to encrease the sum of corpuscles already computed: for as there are creatures much quicker sighted than man, if you could teach a cat to make and communicate the observation, it is not unlikely that puss might give the signal for seeing light much higher up the pasteboard than you could perceive it, which would convince you there are more successions than you had found yourself. Nor could you still be sure of having them all, for a single ball may be too feeble to cause vision at all, and it may require the united

united force of many to excite a sensation in the optics of any animal whatever: so that you cannot know for certain that the light does not find a passage at a height where neither you nor the cat can distinguish it. We may consider further, that the rays at two miles distance from the candle may lie closer together than one eighth of an inch; that light itself is a compound body consisting of seven different coloured parts, as appears by experiments with the prism; neither does the wax turn entirely into light, for we know a great part of it goes off in smoke and vapour; nor yet perhaps is the substance of the wax at all converted into light, which some hold to be a body of its own kind dispersed among the pores of luminous bodies, and not entering into their composition, in which case it must bear a very inconsiderable proportion to the grain we suppose the wax to have weighed. From all which considerations it may be concluded we have been very moderate in our computation, which is more likely to fall greatly short of the truth than to exceed it.

15. Now, how astonishing soever it may appear, to find a drop of wax shattered into such a multitude of pieces, our astonishment must encrease when we reflect on the great tenuity of the wax, and how far it is from being a solid substance. Sir Isaac Newton assures

assures us that gold, the most substantial body we know of, contains more of pore than solid substance: therefore wax, which will swim in water, does not really occupy one fortieth part of the space it seems to fill. Some have gone so far as to suppose that all the matter of this visible universe compressed into a perfect solid would form a cube of but a few inches on every side. I shall not attempt to make calculations of this sort having no sure foundation to build upon: but I think it may be made appear by experiments of the firmest and compactest bodies that the solid matter contained in them bears a very trifling proportion to their apparent magnitude. I believe few will deny me that whenever a heavy body lies upon another they touch, for nothing else besides their solidity and contact prevents the uppermost from falling still lower. Some perhaps may controvert this point; because it being held by the best authorities that every particle of matter has a certain sphere of attraction, immediately beyond which there begins a sphere of repulsion, whose force decreases in more than duplicate proportion the farther you recede from its internal limits, therefore a body falling towards another, when come within the other's repulsion, will be stopped thereby before contact and kept suspended in

in the air, the force of repulsion axactly balancing that of gravitation. But this, however plausible in theory, will appear not to be true in fact; because bodies laid on greasy or dirty places upon being taken off again will draw something from thence sticking to their bottom, which shows they were in actual contact before, for the adhering particles can never be supposed to follow what they had constantly kept aloof by the vigour of their repulsion. Besides considering how very small the sphere of strong repulsion is, if a book laid gently upon the table did hang suspended, yet by a smart stroke upon the upper side you might drive it down within the inner sphere of attraction. From hence we may conclude, that bodies lying upon each other have some of their parts in actual contact, and consequently, since all body is endued with an attraction of cohesion, they must adhere in such parts, and the largeness of their contact may be determined by the strength of their coherence.

Now suppose two plates of gold, the heaviest of substances, as perfectly polished as art and industry can make them, let one be laid flat upon a table and the other suspended horizontally by strings upon one arm of a balance, hanging a weight to the other arm that shall exactly counterpoise it, then let

let down your balance gently till the plate rests upon that on the table, touching it apparently on its whole superficies. If you encrease your weight and the balance be very good, I apprehend a very small one would suffice to draw up the upper plate from the under and consequently to overcome the cohesion between them: a pennyweight might do it though the plates were a foot square, or perhaps a hair could you get a balance perfectly smooth without any friction. Now were a needle worked into the two plates so strongly as that they could not be parted asunder without breaking the needle, it might require many pounds weight to separate them when so fastened. But the parts of compound bodies being held together, not by any glue or cement between, but solely by their mutual cohesion corresponding with their contact, the strength of the needle to resist breaking must be according to the contact its two pieces had together before their disruption: which strength being found so vastly greater than that exerted by the plates to keep themselves united, it is plain the whole superficies of their touching parts bears no discoverable proportion to that of the transverse section in a slender needle. From hence we may gather that the superficies of the plates resemble a net-work of wire, whose meshes

meshes are immensely larger than the thickness of the threads, and whose threads do not correspond with those of the other plate, but only cross them in some few points. And since if instead of the plates you had a regular cube of gold, and were to try with one of the sides, which make the thickness of the cube, instead of the bottom, the experiment would succeed the same, it follows that the compactest bodies are mere network in all their dimensions, containing incomparably more of empty pore than solid substance. But it is happy for us that they are so, for else we should have no use of our goods and utensils, by reason of their perpetually sticking together beyond our power to detach them; nor could you venture to lay your flat hand upon a table for fear of being never able to draw it off again.

16. If it should be thought hard of digestion to imagine that iron and steel, which force their way so readily through other things, should be themselves such hollow shells or wire cages as we have represented, let us remember that all strength is relative, and there is no absurdity in imagining that one hollow shell may penetrate through another a great deal weaker: nor should I despair, if any virtuoso that has nothing else to do would undertake the trouble, to see a knife made of the tinder of coarse cloth that would cut tinder of muslin

lin as cleverly as we do cheese with a knife of steel: but then the experiment must be tried in *vacuo*, for fear any little motion of the air should bend our instrument, and make us haggle or cut awry. On the other hand, I do not doubt that if we could toss a little ball of perfectly solid substance ever so gently against iron, marble, or other the compactest body upon earth, we should see it make its way through them as easily as a leaden bullet would if laid upon the top of a whipped syllabub. Having thus vented my thoughts upon the divisibility and rarity of matter, which, if good for nothing else, may serve to entertain the curious, I shall resume my journey and proceed from the consideration of body to that of mind.

CHAP. IV.

EXISTENCE OF MIND.

How little success soever I may have had in proving the divisibility of matter indefinite, but not absolutely infinite, it will not affect the exclusive title of individuals to existence: for be the smallest particle

infinitely divisible, it is still existent only in respect of the infinity of existent parts it contains. And, upon this hypothesis, we must admit a gradation of infinites, some greater and others less; because, if half an orange contains an infinitude of parts, the other half must contain another, and consequently the whole orange will carry an infinitude double to each of the halves. Now that infinity of parts, whereof the whole material universe consists, although it seems capable of being enlarged by the accession of more matter, will not admit of increase by composition: for there will not be one more Being, nor a larger infinitude in nature upon those parts running into clusters, than there would have been had they continued for ever separate. So that compounds have no place among the rank of Beings, nor does their formation add any thing to the number of them.

2. Therefore, in order to determine between the divisibility and unity of Mind, let us examine whether it has a distinct existence of its own, and whether upon the production of one, there must not be a new Being, not barely a new sort of Being, in nature added to those existent before, their infinitude being encreased by the accession of that one. And for this question I need only refer to the

sense

sense and understanding of every man to answer, whether he does not perceive himself to have a real existence, distinct from all other Beings beside. I do not mean in kind, for there are innumerable other beings of the same species with himself, but in numerical identity, and whether there must not be one more Being in nature for his existence, than there would be without him: but if he consisted of parts, there must have been the same number of Beings existent when he was not, and before the combination of those parts in their vital union, which are become thereby a different kind of Being, that is, the same substance in another mode of existence. Some have doubted the reality of body, of space, of distance, of magnitude, of all sensation, imagining these to be no more than perceptions rising unaccountably in the mind: but I believe no man ever doubted of his existence, at the instant time when he reflected on it. If there be a man of so uncommon a turn as to make this doubt, and he must have another doubt beside, to wit, whether he doubts or no, for nonenity can no more doubt than be assured, he may even turn his back against me, for I pretend to work no conviction upon him. For the rest of us we shall all readily allow, that we have an idea of existence, but whence should we first get it unless

unless from ourselves? for if we are not, we can perceive nothing and know nothing, and consequently can have no assurance of the reality of other things: so that our persuasion of all existence besides, must begin and have its foundation in that of our own.

3. But our ideas being taken originally from sensation, and we having accustomed ourselves to regard whatever appears constantly together as parts of one whole, we contract a grossness of conception, which makes us apprehend ourselves as comprising the whole human composition. For our flesh and members accompanying us wherever we go, and the operation of external objects ending at the surface of our bodies, we conceive sensation diffused throughout them and our very selves extending to the extremities of our organs where we receive the impulse: for because we see with our eyes, and touch with the ends of our fingers, we apprehend ourselves actually present in those parts where we take the impression of objects. But not to insist upon the discoveries of anatomy, by which it appears that their impulse must be conveyed along the nerves before it affects us with any perception, every body knows, that men may be deprived of their limbs or their organs by diseases or accidents and yet retain their existence. Let a man lose a leg or an arm,

arm, an eye or an ear, he still continues the same man, and holds his rank upon the list of Beings as much as he did before. Whatever can be separated from him, he may look upon as a possession, an instrument or organ of conveyance, and that alone which remains after all imaginable separation, is properly himself. Besides, our organs have their separate offices, not interchangeable with one another: the eye which sees cannot hear, and the ear which hears, can never see; but they being numerically distinct, if they were the perceptive substance, it would follow, that what sees is a different thing or substance from that which hears. Therefore they can only be channels of conveyance to some one individual thing: for no man can doubt but that it is the same himself which sees and hears and receives all other perceptions; and we cannot conceive this self divisible, because what might be taken away upon division, would not be him, for he cannot be parted from himself. Compound bodies consist of parts, having the same nature and primary properties with themselves, nor is it conceivable that any assortment of unsolid or immoveable parts, should form a solid and moveable body: then if composition prevailed in Mind too, every Self must contain a number of little Selves, every Mind many little Minds,

Minds, and every Sentient principle a multitude of Sentient principles. But this is a supposal that will not bear the mentioning, for who would not be shocked to hear talk of a half or a quarter of a man's self? Besides, if things sentient were divisible, the parts might be dispersed throughout the four quarters of the world, and a man might have perceptions at the same time in Europe, Asia, Africa, and America.

4. To avoid this absurdity, there have been those who have asserted that Self, Mind, or a perceptive Being, may be produced by a combination of unperceptive principles; not to repeat what I had urged before, that then there may be a creation effected by compounding, let us remark, that upon such combination, the parts considered singly, cannot have, nor are they pretended to have, any other properties than they possessed before, neither can they club to take their several share of a perception; for perception has not parts without parts, and therefore cannot be received piecemeal, but the perceptivity resides in the whole compound jointly. Now, it seems very hard to understand how a collection of distinct substances, for such every compound must be, can perceive what is not perceived by each of them. I can conceive a whole camp to hear the evening gun, because every

every man in the camp hears it, but I cannot comprehend how they can all hear a sound that escapes every single person. And the case would be the same if they were tied or glued together, or if the brains of all could be crowded into one head: nor can I for my life distinguish between their all hearing it, and every one of them hearing it: so neither can I discern with the utmost stretch of the microscope, a perception in any compound or collection of substances, however compacted or united together; which must not be compleat in each of them. The ancient Hylozoists, as we learn from Cudworth, ascribed an imperfect perception to their atoms, which was not perception till it was rendered compleat by the junction of several of them together; and he seems to have had a notion of this imperfect perceptivity himself, in his plastic nature of elements and vegetables, though he never attempted to compleat it by junction. But I can no more comprehend how an imperfect whisper, heard by twenty persons, shall become an audible voice, than how they can all hear a sound heard by none of them singly: I would as soon undertake to explain how a letter might be sent a hundred miles in an hour, by employing twenty men who could walk five miles a piece in the time.

5. We

5. We commonly apprehend things to remain the same while they continue to serve the same purposes, and exhibit the same appearances; thus you call a canal the same, notwithstanding a perpetual influx and efflux of the waters and after you have new turfed the banks, but though it be the same canal, no man will esteem it the same substance; for it seems necessary to substantial identity, that the component parts should remain unchanged. So if the mind be a compound, then upon some of the parts being slipped away and others substituted in their room, though it might still remain a mind it must be a different one from what it was before: and as Lucretius tells us, the mind grows and decays with the body; every man would have a different Self in his childhood, his maturity, and his old age.

6. But it may be said, that mind is not so much a collection of particular atoms, as a figure or harmony resulting from the order wherein they lie, and therefore may continue the same although some, or all of the atoms be shifted: for if you place twelve shillings in a circle, change your shillings as often as you please for others, you do not alter the figure which still remains a circle. But what then becomes of our own existence? for form has none, but is only a modification or particular

manner

manner of existence in body; and harmony has none, being nothing more than the concordance or mutual congruity of sounds whereby they affect the ear in a particular manner. Besides, where shall we place personality? for there is no difference between similitude and identity in forms: an egg at York is of the very same shape with an egg at London, and a concert of the same music, played upon the like instruments, gives the same harmony in both places: therefore two minds composed of atoms, having an exactly similar disposition, must be the same person, and thus there may be a thousand same persons in so many different parts of the globe, as there may be a thousand same forms and harmonies. The same circle may be drawn at once in Tartary and in Chili, or the same tune played at Canton in China, while it is playing at London. Therefore if one particular form or harmony be you, and another particular form or harmony be me, there might be as many you's and me's in the world as there are clusters of atoms capable of running together in the same manner as ours have done. For it may be remembered, that we are not now supposing mind to consist of a number of particles combined together in such or such order, but to be the order itself, considered apart from the particles, and equally capable of residing

ing in any other that should be brought within its compass. Or if you make any other identity of form than that of equality and similitude, then upon having flatted a globe of wax, by which you absolutely destroy the roundness it had, it will be impossible to restore it to the same figure again: because, if the roundness of one piece of wax be a different thing from the roundness of another, by the same reason the roundness it receives upon a second moulding, will be a different thing from that it had before being flatted, as being a figure newly produced, not one drawn back again from some place where it had lain dormant in the interim.

Nor will it be easier to preserve the identity of Mind in one collection of particles than we found it to distingish the diversity of minds in several: for if each particular mind were nothing but a certain order of the particles composing it, we must lose our identity upon every turn of thought; for we may perceive a change in our mind upon passing out of pleasure into pain; but there can be no change among forms, without a locomotion of the component parts, which must destroy the order they stood in before. If you change the place of any two in your circle of shillings, you spoil your circle while they are passing into each others stations: therefore if

their

their personality depended upon their circularity, the shillings during that interval must make none, or at least a different person; or should you fancy the varieties of thought made by a variety of motions of the whole compound, we could never think of two things together, the same body being incapable of moving with two different velocities or in two different directions at once. Let us consider likewise the variations of character, disposition, and expertness, frequently happening in the same subject: the sucking child, who knows not his right hand from his left, may when grown up become master of several sciences; the cross-grained, peevish, unlucky boy may sometimes by good management be made to turn out a sober, discreet, and well-behaved man. But if they were nothing more than compositions, these permanent changes, which render them a different sort of creatures, could not happen without a change of structure in their component parts; which must produce a diversity of compositions and consequently a diversity of persons: contrary to the apprehensions of all mankind who esteem themselves the same person from the cradle to the grave, notwithstanding any variations of character or capacity they may have gone through in the interval.

7. There

7. There seems to lie the same objection against Mr. Locke's doctrine of consciousness constituting identity: it would be presumption in me to contradict a man of his clear and steady judgment, therefore shall suppose I have some how or other misunderstood him; but to the best of my apprehension he seems to have placed our existence in a quality rather than a substance, for by the term Consciousness, I cannot understand a Being, but only a power or property of some Being; nor do I apprehend a man loses his existence or personality, every time he loses his consciousness, by falling fast asleep. Could Mr. Locke himself imagine that his person was annihilated every night when he went to sleep, and re-created again when he awoke in the morning? The most I can allow to consciousness, unless I grossly mistake the word, is, that it should be in most cases the evidence to us of our identity, for scenes that we remember, convince us of our being the very persons present at them. I said in most cases, but not all, for who does not know that he was once a baby wrapped up in swaddling cloaths? and who does not believe that baby to be the very same person with his present self? yet I never heard of any body pretending to have a remembrance, or consciousness of his being in that condition. Nor do I find little difficulty

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in settling the identity of consciousness, for in quality, as I observed before in form, I know no difference between identity and similitude: whatever has a like quality with something else, to my thinking has the same. If I have done any thing I would conceal, yet I am conscious to myself that I have done it, and I suppose you would be the same upon the like occasion, and so would every other man; therefore we are all one and the same person. Well but you all are not conscious of the same fact with me, so the identity of the consciousness depends upon the identity of fact: but this will not do neither, for I am conscious of several actions I have performed, and therefore should be so many different persons. The only way remaining in which I can understand an identity of consciousness, is by placing it in the consciousness of the same person, in which light the idea of person must preceed that of consciousness: so it is no help to tell me I may find my personality by my consciousness, because I must fix my idea of personality before I can make use of the explanation.

8. Mr. Locke has somewhere unluckily let drop that he conceives it possible the faculty of thinking may be annexed to a system of matter, and this notion has been eagerly laid hold of by my lord Bolingbroke

to

to confirm his opinion of the corporeity of all thinking substances. For my part I am not so confident of my own understanding as to pronounce it impossible for nature to do what I cannot conceive possible to be done: but this I will say, that I cannot conceive it possible perceptivity should be annexed to a system, by which must be understood a composition of matter, or any other substance whatever, but must reside in something that is numerically one and uncompounded. For suppose an object to strike upon any one component part of the system, if it raises a compleat perception there, then the rest are useless: if the perception does not begin till this part has communicated the impulse to some other, then is that other the perceptive substance and the first only an organ of conveyance: if both receive it equally, then does the faculty belong not to the system, but to the several parts. Nor can each take its respective share of the perception; for as we observed before, it is inconceivable that a perception should be received piecemeal or made up of what is no perception. And this matter will appear plainer if we consider the nature of judgment and comparison, where both terms of the one, and both branches of the other, must be apprehended together in order to determine between them. If this

man

man knows the other properties of gold and the other knows what ductility is, they can never know the more for this, either jointly or separately, whether gold be ductile: so if one be ever so well acquainted with St. Peter's at Rome, and the other with St. Paul's at London, they can never tell which is the larger, the handsomer, or make any other comparison by virtue of this knowledge. But you say one may communicate his knowledge to the other; very true, but then each has the idea of both before him in his imagination, and the judgment is the act of either severally not of both jointly. Nor is the case different with respect to the parts of a percipient system: let the idea of an elephant be impressed upon particle A and that of a mouse upon particle B, they can never know either jointly or separately which is the larger creature; nor can a judgment be formed until the ideas of both coincide in one and the same individual.

9. And what has been said of perception may be applied equally to volition: for as a body could neither impel nor resist another unless all the particles of the whole mass, be they finite or infinite, had a quality of impelling or resistance; for it is unintelligible to talk of an impulse arising solely from the composition: so neither can any system have a power

a power of beginning motion where there was none in the parts. A hundred men may certainly lift a weight that would crush any one of them, but a thousand would never be able to stir it unless each man had some strength of his own independent on the rest. Whence we may justly conclude perceptivity and activity to be primary qualities, essential to the substances possessing them, inseparable therefrom, belonging to individuals, and not producible by any combination whatsoever of imperceptive and inactive ingredients.

10. If Self be not a substance but a system of substances ranged in some particular order, there appears no such necessary connection between any one Self and any precise collection of substances or percipient form (for we now proceed upon a supposition of forms being percipient) but that they might have contained any other Self: so that these substances and this form, which now constitute Myself, might as well have constituted the Self of John or Thomas, or any other person without implying a contradiction or absurdity; and we must look for some cause yet undiscovered to assign each system its personality. This cause then, before I was existent, might have assigned my personality to any other similar substances disposed in the like order in some distant part of the globe:

now

now why may not this cause do the same at this present instant? for how should my existing in the spot where I now stand hinder the operations of nature elsewhere, or incapacitate her from doing what she could have done a hundred years ago? therefore there might have been two Myselves some thousand of miles apart. But if such a supposition would shock the ears and understanding of every man it will necessarily follow that every Self must be a substance numerically distinct from all others, of whose identity no other substance nor system of substances can participate. And if a substance, it must be one uncompounded of parts: for I am nothing else besides Myself, nor can contain any thing that is not Me, nor yet can I have parts which are neither me nor any thing else. As a piece of matter divided makes several pieces, and a compound form dissolved becomes many lesser forms, so a perceptive substance divided would yield many percipients, and perception always implying personality, each percipient must have a Self distinguishing it from its neighbour: so that upon supposition of a divisibility in the substance of Mind, I should contain as many Selves as there are parts in my composition.

11. Thus have I endeavoured to place this matter in as many different lights as I could,

could, and to turn it about in all manner of ways; but it happens sometimes in these abstruse disquisitions that the very pains we take for illustration renders the subject more perplexing, for being forced to spin our thoughts very fine they become liable to entangle in the reader's hands, and the multiplicity of ideas, into which we divide them by such refinements, distracts his attention and causes them to throw a cloud over one another. Therefore, since I apprehend this a matter of importance, I wish every one would consider it afresh in his own way, and satisfy himself, in a manner most suitable to his own liking, whether he has not a real existence distinct from every other being whatever, and whether Self be not an indelible character which cannot be taken from him nor exchanged with any other person. We often talk of what we would do, if we were Such an one, that is, if we were in his place, with his strength of limbs, endowments of mind, fortune, or circumstances of situation: but no man can even in imagination suppose himself to feel for another or act for another, to perceive his sensations or perform his actions, or that that other should be his very self. We have heard of metamorphoses and transmigrations from one form of being into another, I do not desire any body to believe the truth of those

those relations, but the pleasure we receive in hearing them shows they are not unfamiliar to our imagination, nor do we apprehend a contradiction in supposing the same person to take various forms. But in all those changes the same Self continues throughout: Calisto when a bear, and Ino when a cow, are the same persons, though different sorts of creatures, that they were while women, nor does Euphorbus lose his identity by becoming Pythagoras: and though they should lose their remembrance or consciousness, still we rejoice or grieve with them according as we think they have deserved in their former state. When the poet tells us that Aristotle's soul of old that was, may now be doomed to animate an ass, or in this very house for aught we know, be doing painful penance in some beau; though he goes too far in calling it a painful penance, for the beau perhaps is well satisfied with his present condition and would think it a terrible misfortune to be restored to the dry notions and musty metaphysics of Aristotle, yet we still apprehend the same percipient substance existing in both. We may imagine ourselves having new members added to our bodies, four legs, or twenty arms, or a pair of wings sprouting from our shoulders, yet still we should remain the same selves: or we may imagine

ourselves losing our limbs, deprived of our faculties, and becoming senseless as the stone before us, yet even in that case we should not apprehend ourselves the same substance with the stone we see: whence it appears that we are possessed of an existence and identity of which we cannot even in imagination divest ourselves.

12. And for individuality if we cannot find that in ourselves we can find it nowhere, for all the bodies we behold are undoubtedly compounds, and we have seen in the last chapter how difficult it is to ascertain whether there be atoms or no, and if there should be, we cannot come at the apprehension of them either by experience or reasoning. But we cannot comprehend ourselves composed of parts so as that something might be taken away and the remainder make an imperfect self, or that such imperfect self should become perfect upon the accession of something else. A house may be half built and then is something of a house but not an entire one; a fœtus may be half formed and then is an imperfect man: but in personality there is no medium between completion and non-entity, we cannot half be, but must either be compleatly ourselves or not be at all. By such considerations as these I apprehend a man may convince himself of his being neither

ther a form, nor a harmony, nor a system, nor yet a quality or consciousness annexed thereto; but a real existent substance numerically distinct from all others, uncompounded, and consequently indivisible.

CHAP. V.

SPIRIT.

HAVING settled with ourselves that Mind has a being of its own distinct from that of all other things, and is a pure, unmingled, individual substance, nevertheless, for any thing that has yet appeared it may be a single atom of matter, since we have supposed existence and individuality to reside in atoms: now, in order to discover whether it be so or not, let us examine wherein our idea of matter consists. The essence of things arises from the qualities we find them have; for to ask what a thing is, implies a presupposal of some substance, and a want of information concerning what qualities it possesses, or what appearances it exhibits. Mr. Locke pronounces our idea of substance very confused, and so indeed it is if we go to consider it

it singly, for you cannot form a clear idea of naked substance divested of all its qualities or manners of making itself known to us: but there are some things we apprehend well enough in the concrete, though we cannot in the abstract, as has been made appear with respect to surfaces, which we conceive easily while lying upon the main body, yet cannot by any effort of our imagination detach them therefrom without pulling up a lining besides; so if we cannot form an idea of substance apart from all other ideas, yet when we see qualities affecting our senses, we may have an unconfused idea of something exerting them having a real and actual existence independent of every thing else. For forms and qualities are not beings, but modes of existence in other beings, and the appearances they exhibit must come accompanied with another idea of actual existence in the subject containing them. Therefore, if I were to make our idea of substance the same with that of actual independent existence, which we cannot conceive apart from every manner of existing, though we can easily with it, I should not deserve much blame from Mr. Locke, who doubts whether space may not be ranked among the class of substances, because it has a reality independent on any other substances lying within it.

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2. But I believe nobody ever suspected the substantiality of space before Mr. Locke, and he goes no further than to declare his ignorance whether it be substance or accident; yet few have denied the reality of space, or that we may conceive a vacuum without any substance whatever to occupy it: this is one of the most familiar ideas to our imagination, for any common person entertains it every time he thinks of an empty bottle. Whence we may conclude that substance, in our ordinary notion of it, is that species of existencies which has perception and action, or which affects our senses, or causes discernible alterations in other substances: wherefore space is not usually ranked among substances, because it does nothing, produces no effect, but is the most passive of things, permitting all else to remain in it, remove from it, or pass through it; we neither see nor feel it, nor does it touch any of our senses, but is rather an idea of reflection, for upon discerning objects in different quarters, and observing their distances, we gather by inference that there must lie a space between them.

3. I shall not pretend to be wiser than Mr. Locke, nor to ascertain whether space be properly substance, but our comfort is that it matters not for our present purpose whether we can decide the point or no, since nobody ever

ever dreamt of Mind being mere empty space: so the question lies between its being a corporeal atom, or distinct species of substance of a kind peculiar to itself. We get our first idea of substance I conceive from ourselves, our perceptions convincing us of our existence, not as is commonly supposed by logical inference, I see, I feel, therefore I am, for we know our own Being long before we learn to make such abstractions, nor can one imagine a child to form syllogisms, or draw consequences of this kind: but the idea of being is contained in that of perceiving, for you cannot understand a proposition without apprehending the several terms composing it, and in the proposition, I feel, the term I expresses something real and substantial, or else it would not be different from the proposition Nothing feels, which rather implies a denial of feeling than carries an evidence of it, nor can there be an idea of actual feeling without something that feels.

4. On the other hand, to compleat our idea of feeling there must likewise be something felt, and this gives us our knowledge of substances without us: for when we grasp a stone in our hand we find it press against our fingers, so that we cannot close them into a fist as we might have done before, whence we apprehend it to be a solid substance: and

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if we cast it behind our back, where we can neither see nor feel it, still we conceive it retaining its solidity. But we discover its solidity by other ways, for if we see the stone squeezed hard by a pair of pincers, or struck by another stone hitting against it, though there be no feeling concerned in the case, yet we perceive the stone makes a resistance against whatever presses or strikes upon it: but this resistance between bodies never happens until they touch, wherefore I look upon solidity, resistance, and tangibility, as the same thing, or at least to depend upon one another, and to be inseparable from our idea of body. Lucretius asserts roundly that nothing besides body can touch or be touched, whether he knew thus for certain is more than I can tell, but thus much we must allow him, that if there be any thing which cannot be touched, it is not body, and where resistance necessarily ensues upon contact there must be body: but when astronomers, in describing an eclipse, talk of the shadow of the earth touching the outer limb of the moon, I suppose Lucretius would not allow this to be touching. And indeed our touch gives us the first evidence of external substances, which do not discover themselves to our other senses, until we have been convinced of their reality by that: wherefore the vulgar apprehend savours, odours,

odours, sounds, and light, to contain nothing substantial, and the learned will hardly deny that the effluvia causing smells and tastes, the undulating particles of air exciting sound, and the little corpuscles of light, might be felt as well as a stone, had we fingers fine enough to pick them up, and squeeze them singly; and how much soever they may contend that light touches neither the coloured bodies reflecting it, nor the substance of our eye, but operates and is operated upon by attraction, yet since it is a received maxim that nothing can act at a distance or where it is not, they must admit it touches the ether, or whatever else by its pressure causes that attraction.

5. I know not whether I am singular in the notion, but to me, resistance seems a kind of acting power essential to body; impulse I know it cannot give until received from something else, nor increase it beyond the degree imparted, but when a body resists another striking against it, it does not do so by virtue of any force imparted therefrom, but by an inherent quality of its own. Nor can it be doubted that others have entertained the same notion before, if I translate their Latin expression aright, wherein they style the perseverance of body either in motion or rest, a Force or Power of Inertness. However, as activity has all

all along been understood of a power of beginning motion, I shall not comprehend the power of resistance, if it be one, under that term.

6. Thus solidity, resistance, or tangibility, seems the only positive ingredient in the essence of body, mobility being rather an accidental property than any thing essential. But besides this, we apprehend body to be senseless and inert, which are only negative terms importing no more than a denial of perceptivity and activity; but these negative terms seem the distinguishing characteristic of body. The Hylozoists, indeed, by Cudworth's account of them, held a mean between perceptivity and senselessness, between motion and rest, something that was neither perception nor stupidity, neither action nor inertness, but resembled the thoughts of a man half asleep, or muddled with porter; and that a multitude f these drowsy atoms clubbing forces together might form a genius penetrating, alert, and sprightly: all which whoever can understand must be a much shrewder man than me. But bating this whimsy, it has been universally agreed that matter is of itself void of activity and perception: and though the Stoics and other corporealists conceived that thought and volition might result from a combination of matter luckily disposed into an organized

organized system, yet since we have satisfied ourselves of the distinct existence and individuality of Mind, we may safely conclude that it is another species of substance, essentially distinct from body, and which we call Spirit.

7. As no bounds can be set to the imagination of man, and new fancies arise in proportion as old ones are exploded, it may come into somebody's head one time or other to improve upon the Hylozoists and ascribe a compleat perception and volition to the atoms. For he may imagine it possible that the mutual action of bodies upon one another, may arise from a voluntary exertion of power upon motives, that when they cohere it may be from some satisfaction felt in their contiguity, and when they resist or repel, from some uneasiness brought upon them by the impulse; from which two actions all the operations of nature proceed. So that what was supposed to be spoken figuratively by the ancients, that all things were produced by Love and Hatred, whereby they were understood to mean attraction and repulsion, may be literally true. And here the abettors of indifferency will have an advantage over me, for they may infer from bodies acting constantly in the same manner, under the same circumstances, that they have not an elective

elective power, which they conceive an essential property of spirit: but I, having said so much, and being like to say more concerning the certainty of human action, and having remarked that the conduct of persons who have the fullest freedom of will and command of themselves, is more steady and accountable than that of the giddy and sensual, am deprived the benefit of this argument. Therefore I shall not undertake to prove demonstratively that the fact is not so as above supposed, but I must observe that if it could be made out to be true, though it would follow that there was but one kind of substance in nature, it would not follow that this substance was body: for the idea of body including inertness and senselessness, if the atoms were sentient the consequence would be that they were spirits, and mankind would have been all this while under a delusion in taking the trees, the stones, the earth, they see for bodies, when they are not in reality such, but clusters of spirits held together by the delight they take in one another's company; and if any impertinent particles of light come to intrude among them, they drive them in great hurry away to our eyes. But as this is a mere imagination, like Berkeley's ideal world, Leibnitz's pre-established harmony, and Hartley's

ley's mechanical volition, built upon bare possibility without support of any proof, I shall remain persuaded with the rest of the world that the bodies we see and handle are substances of a different kind from ourselves who see and handle them.

8. Now to compare body and spirit together, we must acknowledge the character of substantiality belonging in common to both; but they are generally held to differ in these respects, that spirit is penetrable, unextended, having perceptivity and activity, by Mr. Locke called motivity, to which some add illocality, and others self-motion; body solid, extended, senseless, inert, occupying space, and moveable upon impulse. I have already laid down the capacity and incapacity of perception and action for the distinguishing marks of either, so have nothing more to add upon them: but concerning the other qualities, as I happen not to enter thoroughly into all the current notions of the schools, I shall take leave to deliver my sentiments with the freedom of one who would judge for himself, but without the arrogance of one who would suffer nobody else to do the like. I shall begin with penetrability which, though confidently asserted, appears to me a doubtful point whereon we have not sufficient foundation to determine either way: we see by

by a thousand instances every day that bodies protrude and resist one another, nor can the most yielding of them be forced into the same place by all the contrivances of art or powers of nature; but how know we what would be the case with spirit could we see the experiment tried? We live immured in walls of solid bone, so that we cannot come at our sentient part to push against it with our finger, or apply it to the sentient part of another person, in order to know the result. Could we pick a spirit out of its cell and move it along a line upon the table where there lay another spirit with some little body before, we might satisfy ourselves what it would do. If we found it stop at both, or protrude them forward, we must pronounce it equally solid with body: if it passed easily through the body but stopped at the spirit, we must conclude body and spirit alike solid with respect to substances of their own kind, but penetrable by those of the other: if it found resistance from neither, we might then pronounce penetrability the distinguishing property of spirit: but these are trials we can never have an opportunity of making.

Were I permitted to conjecture in a matter wherein nothing better than conjecture can be had, I should suppose spirit naturally penetrable, but capable of rendering itself solid upon

upon occasion with respect to particular bodies, and that hereon our activity depends. I have formerly given my reasons for imagining that the force wherewith we move our limbs is derived from the animal circulation rushing into the muscles through certain nerves, and that the orifices of these nerves are provided with stoppers, which the mind draws up at pleasure to give the animal spirits admittance: now what should hinder our conceiving these stoppers pushed up by little hairs or fibres whose other ends lie within our spiritual part, which by its natural penetrability admits them into the space where itself resides? but upon the mind rendering herself solid with respect to any particular fibre, it is driven forward, thereby lifts up the stopper and opens the passage into the nerves; until volition forbearing to act the penetrability returns, the fibre no longer pressed falls back to its former station, the stopper following closes the passage, and muscular motion ceases. Whoever should think this conjecture probable, would see that spirit possesses the united powers of body and space: for body resists but cannot admit, space admits but cannot resist, whereas spirit can either resist or admit as it pleases. Nor let it be made an objection that upon the fibre entering the residence of the mind there must be two substances existing

isting in the same place; for I see no inconsistency in imagining substances of different kinds to co-exist together: if space be a substance, all bodies co-exist with some portion of that, and if there be a Being which fills all immensity, all other substances must co-exist with it, or they will have nowhere to exist at all.

9. I have already owned that I have but an imperfect notion of what the schoolmen understand by extension; if it imply a consisting of parts I cannot be suspected of ascribing that to spirit after the pains I have taken to prove that perceptivity can belong only to individuals. But I have an idea of a thing being extended without parts, and so have other people, if one may judge by their discourses: for I have heard of the stench of a brick-kiln reaching into the houses in London, and of a noise extending many miles around, yet I never heard any body talk of the half or the quarter, or any other part of a smell or a sound. And though these be not substances, yet having once gotten the idea of extension without parts, I do not see why we may not apply it to substance, which we may conceive existing and present throughout a certain portion of space without losing its unity. I cannot well be denied the possibility of such a diffused presence by far the

greater part of mankind who hold a simple indivisible Being present in all the regions of immensity. But that we ourselves have this extension in my sense of the word, though bounded within very narrow limits, we may be satisfied by considerations drawn from facts falling daily under our notice and principles universally agreed upon. It is an uncontroverted maxim, and may pass for a self-evident truth, that nothing can act or be acted upon where it is not, and though bodies seem to act at a distance, there is always some medium passing between the agent and the patient, nor is any thing done to the latter before the arrival of the medium. Thus an engineer may batter down a wall a mile off, but the ball does no execution until it touches the wall. In like manner we see and hear, and are otherwise affected with bodies lying far from us, but then something must be thrown from them to strike upon our organs and raise motions there which are propagated onward to the seat of perception: nor can we receive sensations of any kind, unless the nerve, or animal spirit, or ether, or whatever else it be immediately exciting them, either penetrates the mind itself, or at least comes into contiguity with it.

Now let us suppose a chess-board with double sets of men, a red and a green besides the

the yellow and black, so that every square of the board may be covered with a piece: set this board upon a table before you and I believe it will be granted me that you may have a distinct view of all the pieces at once. We cannot imagine that matter raises different sensations otherwise than by a difference of size, or figure, or velocity, or direction, or composition, or other modification; but the same particle of matter can be susceptible of no more than one modification at once, therefore there must be sixty-four particles at least operating upon the mind together in the above experiment, I say at least, for it is more than probable that each object upon the board employs many particles to convey its idea: which sixty-four particles cannot possibly enter, nor become contiguous to a mathematical point, and consequently the mind must at the same instant be actually present throughout such a portion of space as may touch or contain them all. This space I shall call the sphere of our presence, not that I pretend to know it must be round; but because it is the fashion to apply that term to every figure we know nothing of. If the reasonings above used be just, and I can discover no flaw in them, they will demonstrate a remarkable difference between spirit and body, for the sphere of a spirit's presence will

will be found at least equal to the space occupied by sixty-four particles of matter: therefore though the atoms should be sentient they cannot receive near the number, nor variety of ideas whereof we are capable.

10. Nor is this sphere of presence a novel thought of mine, but at least coeval with Aristotle, of whom it is currently believed that he held the mind, called by him Entelechia, coexistent with the whole body, being all in all, and all in every part: by which it is plain he apprehended it to be a true individual, yet present and perceptive throughout the whole space occupied by the body, for had he thought it a compound, it would not have been all in every part but one portion of it in one limb and the others severally in the rest. Indeed this notion of his is generally exploded and ridiculed, because he carried the sphere of presence a great deal too far, for we are now assured by experience, that when the nerves are any where obstructed in their passage to the brain no sensation will ensue though the external organs continue to perform their office, whereas were the mind actually present in the eye she might discern what passes there notwithstanding any obstruction of the optic nerves within. But the same objections do not lie against me who suppose the sphere of presence

sence to enclose an exceeding small compass situate probably somewhere in the brain, yet large enough to contain many variously modified particles of matter, though not large enough to hold the hundredth part of those floating about in our sensory; for which reason we remember much more than we can at any instant recollect, and sometimes have an expression or a name at our tongue's end which we cannot bring out, because we cannot draw the particle, whose modification is the idea of it, into our presence for inspection. And there is another particular wherein I have the misfortune to dissent from Aristotle, for if the entelechia be commensurate with the body, it must grow as that grows, and contract when that is diminished, having a much larger scope in a man of full stature than it had in the sucking child, or if the man lose an arm, it must withdraw from the space occupied by the arm. But I apprehend the presence of a spirit incapable of becoming either larger or smaller than ever it was: for as a solid particle of matter must always occupy, so a spirit must always be present in, the same extent of space, magnitude in the one and presence in the other being an essential primary property annexed indissolubly by nature to the substance possessing them.

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11. It is true there are insuperable difficulties among our ideas relating to magnitude, which whoever delights to puzzle himself with may receive good assistance in the sport from the notes in Bayle's dictionary under the article Zenon. One way by which he disproves the reality of magnitude is because in all continued motions the moving body perpetually changing its place must be in two places at once, that is, in every instant or moment of its passage, for it never stands a moment still. But to add to the foresaid sport I would beg leave to ask Monsieur Bayle how he knows there are moments of time any more than mathematical points of space or atoms of body, or that a minute may not be infinitely divisible as well as an inch of whipcord or of empty vacuum: which if it may, then his argument of the moving body being in two places at once will fall to the ground. These amusements may serve to convince us there are subjects in nature beyond our comprehension, some questions to which the wisest man can give no better answer than, I do not know, and to confirm what I have laid down in my chapter on judgment, that absolute certainty was not made for man: yet do they not impeach what was added there, that man is so constituted as to do very well without it, being capable of rational

rational moral assurance to the exclusion of all doubt, which is knowledge enough for the direction of conduct and to answer all the uses of life. And since what knowledge we have derives all originally from sensation, that is best to be depended upon which lies nearest the fountain head being drawn from experience by the fewest deductions of reasoning. Now constant experience testifies that bodies cannot have different magnitudes, forms, velocities, directions, or other modifications, at the same time; that while under the same modification they cannot act variously upon one and the same subject; that many of them must have so many several places to exist in, which cannot lie in contact with a mathematical point; nevertheless, that they act very variously upon us in the business of perception at the same instant, and that it is the same Self which receives all their various actions: from whence the sphere of presence, belonging to one individual substance, follows by a single consequence, without that long chain of subtile deductions hung upon one another which must be travelled through before you can discover the force of Bayle's objections, every step wherein still encreases the hazard of an unperceived fallacy. As this notion of an indivisible substance, existent and present throughout a divisible portion

tion of space, will be made use of upon several occasions by-and-by, I wish it might be maturely considered before proceeding any further: for I do not pretend to infallibility, nor desire to lead any man into an error through hastiness, therefore let him not trust to my conclusion but turn over the matter in his thoughts till he has digested it maturely and satisfied himself whether this, which is one of my foundation stones, has a solidity sufficient to bear any superstructure I may hereafter raise upon it.

12. There is one quality more belonging both to body and spirit to which we can neither give a name nor a description, but whereon their vital union together depends. We know that wherever the body goes, the mind constantly accompanies it and keeps her station always in the same part of the human frame, but by what power of either this happens we cannot discover. It cannot proceed from solidity, impulse, or perceptibility in the one, nor from penetrability, activity, or perceptivity in the other, but must be a distinct quality of itself. If I could come into Stahl's notion of digestion and nutrition being an operation of the mind, and that she can perform a voluntary act without the least idea of any thing relative to what she is about, I might suppose the mind held in junction with the body by her own unperceived volition;

tion: but as I happen not to enter into his sentiments upon that point, I cannot take the benefit of them to draw such conclusion. Yet perhaps the junction may be so far owing to the mind as to depend upon the forbearance of her volition, and that she might detach herself at any time had she ideas of the proper manner how to proceed for effecting it: for we may have powers which we cannot exercise for want of knowing them, ideal causes being a necessary preparatory to action. But in our present condition it is fortunate that we have not such ideas, for our perceptions all coming to us by the action of our bodily organs, were we to quit them we might lose all our ideas, and so never know how to get back again. Nevertheless, it is not inconceivable, as we shall endeavour to show in another place, that the mind may stand in a situation to receive perceptions without corporeal organs, and then may join herself to particles or systems of matter occasionally without losing her ideal causes flowing from another fund.

13. The notion of illocality is at least as old as Aristotle, but has been continued down to the moderns, for Cudworth declares himself of that opinion: but though he will not allow spirit as such to have any place, he admits it may have one with respect to the body

body whereto it is vitally united, wherefore he tells us some held that spirit must always be vitally united to some body or other that it may have a place in nature: which seems to make the very existence of spirit to depend upon body, for I cannot conceive a thing to exist at all which has no place in nature. I apprehend this doctrine of illocality arose from the defining extension a having parts without parts, for those who held this definition could no more conceive a mathematical point in space than in body; therefore whatever had a place must possess some portion of space, which being divisible, so much of the substance as lies in the right-hand half of this portion will be a distinct part from that which lies on the left. And that this was Aristotle's way of thinking appears manifest, because he allowed a where to spirit though he would not allow a place; which seems to me a distinction without a difference, for to be somewhere or in some place are in my comprehension synonymous terms. But I do not apprehend the individuality of a substance depends upon the individuality of the space wherein it exists; if we cannot conceive the one without the other it is because our conceptions are taken from the bodies we see, whose divisions always correspond with those of the spaces they

they occupy: but we must, upon many occasions, admit conclusions we cannot conceive; therefore our want of adequate conception, is not sufficient to overthrow the reasons before given for the individuality of spirit and at the same time its presence throughout a space consisting of distinguishable parts.

14. But which way soever we express ourselves, we cannot well appropriate mobility to body, nor deny that spirit partakes of the like quality, without which there can no more be made a change of Where than a change of Place. While in my chamber this morning I was one where, now I am come down into my study, I am other where; this Aristotle must needs grant me: but how I could get either from one where or one place, to another where or another place, without locomotion, let him that can comprehend it explain.

15. Some have supposed the mind able to move herself by her own energy, which cannot well consist with what I observed long ago, that our idea of Operation requires there should be two substances concerned, one to act and another to be acted upon: but waving this difficulty, if the mind has such power, we can never know it, because she cannot exert it in her present state. We live imprisoned in walls of flesh and bone, and like a snail

snail can stir nowhere without our houses accompanying us: when we walk, we act upon our legs, which thrust the body forward, and that moves the mind along; so that in walking we are as much carried as when riding in a coach driven by our own orders. Nor let it be thought the mind moves herself, because in our ordinary movements she goes willingly along with her companion, for this is not always the case; a man may be pulled forcibly from his seat, though he resist and struggle ever so much, or be ever so averse to stirring; or he may be carried in his sleep, when there is no exercise of volition: but in these cases, when the body is dragged away, the spirit will not stay behind, which manifestly shows it passive to receive a motion it cannot avoid.

16. Since we find a passive locomotion in spirit, we must acknowledge it capable of impulse from body, for body can give motion no otherwise than by impulse; and that spirit is capable of imparting impulse we know by our moving our limbs. But impulse, whether given or received, does not necessarily excite perception, for we have none either of the particles vitally united to us or of those ends of fibres whereon we begin our action. Therefore we must look for some other property in body rendering it perceivable, and this we may call perceptibility, without which

perceptivity

perceptivity in spirit would be of no avail; for to produce an effect, there must be an active power in the agent, as well as a passive power in the recipient. Whether spirit has the like perceptibility too, we can never certainly know, because we can never try the experiment necessary to discover it. If I may be permitted to conjecture once more, I should suppose this not a primary quality in body, but resulting from a combination of many particles thrown into particular figures, or other modifications, because primary qualities must act uniformly, nor could they exhibit that variety of ideas we perceive. Why then may not spirit, by virtue of its indifference either to solidity or penetrability, imitate the like modifications? Suppose a piece of marble skilfully engraven so as to leave the letters of a word standing out from the rest of the surface, if the marble were laid upon your hand, you might feel and understand the word. What then should hinder but that a spirit, being contiguous to another, might make itself solid in the parts of the sphere of its presence corresponding with the shape of the letters, leaving its natural penetrability in the spaces between, which then might produce the same effect as the marble did upon your hand. And thus spirits, when disencumbered from the shackles of

of matter, may communicate the same perceptions, besides thousands more, that we receive from our organs, both of sensation and reflection.

CHAP. VI.

DURATION OF MIND.

From the individuality and distinct existence of Mind may be inferred her perpetual duration; for the powers of nature can neither encrease nor diminish the stock of Beings; they may throw them out of their assortments and so dissolve the compounds formed thereby, or destroy the secondary qualities resulting from their composition; but what has existence cannot be annihilated, and what is one cannot be divided, nor can primary qualities, essential to the subject possessing them, be taken away. Perceptivity and activity have appeared to be the properties constituting the essence of spirit, and distinguishing it from other substances: as to what has been offered concerning solidity, extension, locality, and mobility, whether it shall

shall be received or no, affects us not at present.

2. So far then as relates to the individuality, existence, and inherent perceptivity of spirit, I may be counted orthodox, but I will not undertake to preserve that character always, for I am now going to side for a while with the corporealists, whom I take to have the advantage in some particulars over their antagonists. Nor can this be called a desertion, for I have never sworn implicit obedience to any master, but have claimed to use a sober freedom to examine whatever I shall hear suggested from any quarter. I laid down in my general introduction, as a reasonable presumption, that the tenets of every sect among mankind must contain a mixture of truth, for else they would never have gained credit, because men do not wilfully embrace error, but are led into it by unwary conclusions from something for which they have a solid foundation. If such presumptions be thought a prejudice, and who can keep perfectly clear from prejudice? it is a more excusable one than that with proceeds from the spirit of opposition. For this engages men to treat an antagonist as an enemy, and even to deny him the rights of an enemy, but my propensity to judge the best of every one, inclines me to seek excuses for him in the fallibility of human reason, which draws

draws false conclusions from true premisses: therefore how erroneous soever I may judge the corporealists in the main, I am better satisfied in discovering some latent fallacy misleading them in their deductions, than if I could find nothing similar in their way of thinking with my own.

3. Now the particulars wherein I apprehend them not so grossly mistaken as commonly supposed, are these, that sense, thought, and reason, result from an organization, therefore whatever possesses those faculties must be a compound. No doubt I shall be thought to contradict myself herein, having all along used sentient, percipient, and perceptive, as synonimous terms, and contended so strenuously that every substance to which those epithets belong, must be one and uncompounded. We have had no occasion hitherto to distinguish between those terms, and to have done it, while needless, would have tended only to perplex and burden our thoughts; but I am now under a necessity of making a distinction between percipience and perceptivity, which though a pretty nice one I hope to make it understood. The powers we ascribe to ourselves in our discourses depend partly upon our natural abilities, and partly upon the instruments we have to employ: a man may be called a good rider that is expert to keep a firm seat upon the saddle, but

but while marching among the infantry he is no rider at all; or he may be pronounced able to ride a hundred miles in a day, if he have strength to support the fatigue, but he is not able to ride twenty without a horse, or with a lame one. So when we find a person asleep, or meet him in the dark, we may affirm of him that he has a very piercing sight, if we know his optics are good; yet in these situations he can no more see than the table. In like manner a substance is perceptive, that has a quality of perceiving objects upon application of them; yet it cannot perceive without a proper conveyance to bring the impression of objects to it: therefore, if it be so placed as that no impression can ever come at it, it is no more percipient than any clod in the fields. Thus perceptivity is nothing else beside a bare capacity in the subject to receive perceptions when excited, but sense or percipience is the standing so circumstanced, as that the impulse of objects striking upon us may be transmitted so as to raise perceptions: and this requires an organization, which implies a compound of many parts; for I can no more see without eyes, hear without ears, nor meditate without organs of reflection, than I could without a perceptive spirit to receive the notices transmitted thereby. What notices a separate spirit might receive from other

other substances accidently approaching it I need not now enquire, for all the precipients we have any knowledge of being vitally united to some organization, and their perceptions depending thereupon, we may safely pronounce all the percipients we know to be compounds.

4. And the case is plainer with respect to the faculties of remembrance, consciousness, reasoning, judging, dividing, comparing, and all other modes of thinking: for we cannot remember or be conscious without inspecting the records lying in our memory, we cannot judge without a discernment of something distinct from that which judges; in reasoning we employ our organs of reflection to bring the proper materials before us for our contemplation, and when we divide and compare, there must be something within us exhibiting the objects wherein we observe a difference or similitude. Therefore those who define the mind a thinking substance, necessarily make it a compound whether they discern the consequence or no, for cogitation cannot be performed without the command of certain instruments, to bring ideas before us for our inspection, to change, to marshal, to separate them, and trace their connections or relations from one inference to another. For this reason I remarked in the chapter of sensation that

that Mind was an equivocal term used to express two very different things, which I called the philosophical and the vulga mind, though I cannot help acknowledging that men of thought and learning for the most part understand it in the vulgar sense, or rather confound both together. The former I take to be a pure uncompounded spirit endowed with perceptivity and activity, but incapable of actual perception or action without an organization suited to its purposes: by the latter I understand this same spirit together with so much of its organization as is concerned in the business of thinking and reflection, which must be a compound consisting chiefly of corporeal parts separable from one another, and all of them from the spirit whereto they are united. In this mind our faculties of reason and memory, our knowledge, our talents, our habits, our passions, our sentiments, and whatever else distinguishes the characters of men, reside: and this mind I apprehend to be the same with what is commonly called the human soul:

5. If any shall take offence at my making the soul compounded, dissoluble, and perishable, let them consider it is not I who make it so but themselves by their application of the term: for words are mere arbitrary signs, capable of taking any signification that man-

kind shall agree to put upon them. Were I left to myself I should apply the name of Soul, to our spiritual part alone, and shall do so sometimes where the matters I handle will admit of it; and then after all that has been delivered already nobody can suspect me of holding it perishable. But the misfortune is that men in their division of body and soul do not make the separation clean, but take in some finer parts of the former into their idea of the latter, as appears manifest by their ascribing faculties to it which cannot subsist without an organization: for a naked spirit is no more a thinking substance than it is a walking substance, it can indeed think whenever joined in composition with proper organs of reflection, and so it can always walk in composition with legs and crural muscles. Thus, after the usual division of man into body and soul, we may again subdivide the latter into organization and spirit; but this subdivision being not ordinarily taken notice of, the term Soul becomes applied indifferently either to the perceptive spirit or to the whole percipient containing that in conjunction with its system of reflective organs. While men remain unsettled and variable in their notions of the soul they must not blame me for speaking of it in a manner they do not like, or that seem contradictory to what I have

have spoken concerning it at other times, for this will unavoidably happen so long as in compliance with custom I am obliged to vary the idea belonging to the term. So then the question concerning the corruptibility of Mind or Soul is a question of language rather than of fact, and may be truly answered Ay or No, according to the different senses wherein you understand them. And the like question capable of contrary answers may be proposed concerning Person: who does not acknowledge himself mortal, that he was taken from dust and shall crumble into dust again, and in a few years shall be no more; we hear such expressions used every day, and they are justly used while we consider our whole human frame as ourselves. But in our seasons of abstraction, when we restrain Self to the spiritual part, we change our tone, for then we claim to be perpetual, unperishable, and unchangeable, to flourish in immortal youth, unhurt amidst the war of elements, the wreck of matter, and the crush of worlds.

6. Thus in disputes upon the nature of the soul, while it was defined a reasoning, thinking, sentient substance, the corporealists seem to have had the advantage. For issue being joined upon its simplicity or compoundness, it seemed admitted on both sides that if compounded it was Material: therefore finding it

it uncontroverted that every compound must be made up of matter, and being unable to conceive the faculties of reason, thought, and sense, residing in a simple substance, they were not quite absurd in concluding the soul to be no more than a very curious assortment of corporeal particles. But if we take along with us our foregoing distinction between percipience and perceptivity, we may admit a sentient composed of unsentient parts, yet deny that such composition could consist solely of matter, but must contain one perceptive ingredient to receive the notices brought by the rest. For if a grain of sand were placed where the spirit resides in the most exquisite organization that can be contrived, there would be no more thought or percipience in this compound than there is in the Venus de Medicis.

If any one shall still make a difficulty in distinguishing between a capacity and a power of perceiving, let him consider whether he does not apprehend a difference between a blind man and one with good eyes shut up in a coal hole: both lie under an impossibility of seeing, yet both have not lost their sight. When Ulysses stopped the ears of his crew with wax, on sailing by the Syrens, he did not destroy their sense of hearing though he put it out of their power to hear the enchant-

ments.

ments. And a strong man bound hand and foot becomes unable to stir, yet retains his vigour and natural ability to move. So a spirit may retain its perceptivity, that is, capacity of receiving perceptions whenever excited, after losing its percipience or power of perceiving by being removed from every thing which might bring objects to excite them.

7. Having satisfied ourselves that our spirit or soul, if I may give that appellation to the spiritual part singly, shall have a duration beyond all the powers of nature to cut short, our next step will be to examine what we shall carry with us upon quitting our present habitation: and we can assure ourselves of no more than our two primary faculties of perceptivity and activity, which being inherent in our constitution nothing can divest us of. But these will avail us little of themselves, for we shall neither be able to perceive nor act without something added thereto, furnishing ideas for us to perceive or materials for us to act upon. Therefore, the knowledge of our perpetual duration and perceptivity affords us no light to judge of our condition hereafter: we know that we shall continue existent and capable of receiving perceptions, but what perceptions shall accost

accost us, whether those of pleasure or pain, of sagacity or dullness, or none at all, we are utterly ignorant. Nor can we tell that our percipience shall remain, nor whether we may or may not carry with us that part of our organization wherein our faculties of reflecting, judging, thinking, reasoning, reside. After what has been said of the extreme divisibility of matter, it appears possible that we may have a compleat system of organs within us so small as to elude all our observation, too fine to be discerned when going, or to be missed when gone: so that notwithstanding all the appearances upon death, and though the carcass seems to lose nothing of its weight, there may be a little body composed of members fitted for sense and action which flies off unperceived. But should this be the case, and should our sensitive and rational faculties accompany us, they may be reduced to bare capacities without power of helping ourselves to a single idea, unless some foreign aid shall befriend us. For we have seen in the progress of these enquiries how the mind, in her acts of recollection, of reasoning, of habit, and passion, communicates with the animal circulation; how know we then that she can perform her operations at all when separated therefrom? We find ourselves more or less ready

ready at those operations according to the disposition of our body, and when the communication is cut off by fits or sleep we cannot perform them at all. Therefore it is not impossible that the causes bringing us all our ideas may reside in the grosser parts of our body, that upon parting from them we may lose our remembrance, our knowledge, and all our acquirements, and pass into another state as much a blank paper as ever we came into this, capable of taking any writing that shall be marked upon us, but having all that was written before quite erased.

3. Or it may be that our whole material frame shall be dissolved, and the spirit fly off naked and unattended by any organ, yet retaining its perceptivity, we know not how it may be affected by any corporeal particle into contiguity, or entering the sphere of its presence. Some have asserted that our perceptions are excited, not by animal spirits or fibres, but by vibrations of ether pervading their interstices: if this be true we shall not want for ether wherever we go, but how the stronger vibrations of ether at a distance from gross bodies shall affect us we are utterly at a loss to guess. Neither can we be assured concerning the perceptibility of other spirits, whether they may exhibit ideas to one another,

ther, whether such operation be necessary or voluntary, nor how they may stand disposed either to comfort or torment us.

9. In either case our condition will be determined by the objects accosting us, and company we fall into. We are here luckily situated in an organization enabling us to help ourselves to the conveniences and enjoyments of life, but when turned out of this we know not where to find such another, nor how to get into any other at all. Though surrounded with dangers on all sides, we have sense and experience to avoid them, but when divested of our sense and experience, we may be like a blind man turned out into a crowded street, having nothing but chance to direct our steps, insensible of mischiefs before they fall upon us, and unknowing which way to escape them. We may be tossed about among the elements, driven by streams of air, or whirled round in circles of fire, the little corpuscles of light may hurt us, and the ether teaze us with its continual repulsion: in short, we have every thing to fear and little to hope for. Thus the discovery of our durable and perceptive nature affords no comfort, for while we confine our contemplation to that, the prospect lies dismal, dark, and uncertain before us. Let us then turn

our

our thoughts upon external nature, in order to discover what rules and powers there may be governing that, in hopes of learning something how they may affect us, and in what manner we are likely to be disposed of.

CHAP. VII.

EFFECTS AND CAUSES.

THOUGH we are all convinced of our short continuance in this present state, we are well satisfied that the course of nature will not be interrupted by our departure: the sun will still rise and set, the tides ebb and flow, the trees continue to bear their fruits, the cattle to multiply, the earth to yield her encrease, and the business of mankind to go forward, after we are dead and gone. But the contemplation of these things gives us no instruction how to provide for our future accommodation, nor furnishes us with any light to discover what accommodations may be provided to our hands. Shall we heap up riches? those we must leave behind, or could we carry them with us, our money would not pass current in the other world.

world. Shall we plant gardens or breed up numerous flocks? their produce will not suit our digestion. Shall we raise a family or spread our fame amongst mankind? we may not remember our own names, nor have an intercourse with the living to know what they say of us. Shall we improve knowledge and cultivate the sciences? our ideas may be totally different, and our sciences unintelligible to us. Shall we rectify our dispositions of mind, and lay in store of virtues? these are habits wherein the animal circulation is concerned, nor can we be sure they shall continue when that is removed from us. Shall we be careful to nourish the little body that is to serve us for our next habitation, to invigorate its limbs and quicken its organs? we know not where they lie, nor what we can do to improve their growth. And as we can do nothing of ourselves, so neither have we assurance of any thing that will be done for us: we know not what nests shall be provided to hatch us into life, nor what parents we shall have to protect our tender infancy, and teach us the learning necessary for our conduct; what sustenance the air may afford, or where to find it, or whether we shall want any sustenance at all; what variations of weather may prevail in the ether answering to the pleasing warmth of a vernal sunshine,

shine, or the storms and inclemencies of winter, nor how to shelter ourselves from the latter. The subtile fluids causing gravitation, cohesion, electricity, and magnetism, may strike our new senses instead of lights, sounds, savours, and odours, and fill us with agreeable or troublesome sensations. We may meet with different species of animals proportionable to our size, answering to ravenous birds and beasts of prey or such as serve for our uses in life. We may fall into societies of fellow-creatures among whom we may find friends and enemies, who may give mutual delight by their conversation, or vex one another with their contrariety of tempers and opposition of interests. Since then we can find nothing certain by considering the constitution of particular things, let us search for the general laws prevailing throughout all nature: for perhaps we may see that their influence must occasion some resemblance or similar tendency in the municipal laws of the several regions of nature, and we may discover some methods of conduct whereby to put ourselves in a situation to receive benefit and escape damage from that influence. But as those laws depend upon the causes operating in the productions of nature, we must endeavour to investigate the causes from their

effects

effects discernible to our senses or discoverable by our reason.

2. We may distribute our prospect of nature into three parts, primary qualities, motion, and situation, which concur in every operation we see or can think of. When a cannon-ball dashing into a heap of sand disperses it all about, the situation into which the particles are thrown, follows from their several situations in the heap and the contact or propinquity of the ball when striking, from the violent motion wherewith it struck, and from its solidity to give, and their own solidity to receive, an impulse. So the growth of plants is owing to the near situation of nutritious particles in the earth that bears them, the position of their little parts in fibres and tubes fitted for containing the sap, to the action of sun and air, and to the properties of matter whereon that action depends. Nor is the case different with respect to the acts of free agents, which cannot proceed without a close situation of that which is to be the subject of their action or object of their perception, nor could their organs take a different modification whereby to exhibit different ideas without a motion in their parts, nor could any thing be perceived or done without perceptibility and mobility in body,

body, or perceptivity and motivity in spirit. And there are three causes commonly observed in the phenomena we see, Chance, Necessity, and Design. When the wind drives about the seeds of thistles, they fall in particular spots by chance; where they light, the peculiar contexture of their parts makes them necessarily produce plants of their own species; and when we cultivate and dress our ground, sow our corn, keep it weeded, and harvest it, we proceed by design.

3. I shall begin with the consideration of motion without which the courses of nature cannot be carried on: but this we may satisfy ourselves is not a quality of body, which is a moveable but no more a moving than a quiescent substance, being alike indifferent to either state, and continuing in either until put out of it by some foreign force. We see bodies moved by other bodies striking or shoving against them, but the mover gives no more motion than it had itself before, and always loses so much as it has imparted to another. And though motion sometimes seems to proceed from the pressure of quiescent bodies, there is always some external impulse occasioning the pressure: for two bodies meeting with equal force in opposite directions, after having stopped one another, will lie for ever close together, gently touching, but

but not pressing each other unless something pushes or strikes against them on the outside. It is true we see motion frequently produced without discerning the cause, but then experiment and reason assure us that bodies never produce motion, but only transmit it by an impulse arising from their natural property of persevering in a motion once received. Thus, while we confine our thoughts to matter, it will appear that every motion is the product of some preceding motion, transferred from body to body, and incapable of increase by the translation. That there is an inexhaustible source of impulse somewhere, though undiscernible by our senses, we may rest assured when we consider the dissolving power of menstruums, the violence of fire, the strong contraction of our heart and arteries, the stability of heavy masses held down by gravitation to the earth, and the firm cohesion of metals: all which must have some prodigious fund, we know not where to find, from whence to derive the force they exert. It seems not improbable there may be streams of a most subtile matter much finer than ether itself darting incessantly along in all directions with inconceivable velocity: that the solid parts of quiescent bodies lie in the spaces between these streams, which likewise throw and preserve the atoms in their longitudinal

tudinal position of wire before supposed, that upon the touch of fire thrusting any of the particles aside into the stream, it dashes them about against other particles, driving these likewise upon other streams, and so causes that explosion we find in gunpowder. Just as if an army were marching briskly along in very wide ranks, another army in like loose array might march quietly between them: but if a few men were pushed into the others ranks, it would cause a violent commotion and tossing to and fro among them. We may help ourselves a little in this idea by considering a cube of glass hung up between candles on all the six sides of it, the rays would pass continually through without being stopped by the glass or jolting against one another; and this whether the glass remained still or were swung to and fro; but if by a smart blow the parts of the glass were to change their position, forming a multitude of little cracks, it would become opaque and not afford them a passage, in which case if the streams of light were strong enough they must rend the glass into atoms and keep buffetting them about until by frequent tossings they had brought them to lie in the interstices between themselves.

4. It may seem at first sight impossible that such streams of subtile matter should be able to run in all directions without stopping

or jostling one another: but let us consider that we find by experience the same thing happens in the passage of light. Hang a multitude of candles round the room and you shall be able to see any one of them distinctly through the light of all the rest. The stars scattered about in all parts of the upper hemisphere find their way to our eyes, but they must traverse many miles of thick solar radiance before they can come to that shadow of the earth which makes our night: and their rays falling upon my eyes must cross those falling upon the eyes of other persons a mile around me in a variety of angles: yet all this without any stoppage or deviation from their course, for if they were at all affected by the other rays they pass through, it must cause perpetual refractions and we should see them dance about like so many Will-i'the-whisps. But what makes the difficulty in this case is our conceiving the rays of light to be so many continual streams like those of water, the parts touching close upon one another, whereas it has been observed in CHAP. III. that the corpuscles composing a ray of light may possibly keep a distance of a hundred and sixty miles behind the next preceeding them, though they follow so exceeding quick that we think their impulse upon our optics continuous. Now the particles of subtile matter,

being

being much smaller and swifter than those corpuscles, their bulk may be estimated to bear an infinitely less proportion to the spaces between them than a ship does to the length of one hundred leagues. Let us then imagine ships to sail from every port in Europe to America and others from every port in America to Europe, each ship a hundred leagues behind that which parted last from the same port, and their courses be ordered in such manner as that they should cross over one particular spot of the ocean: those ships would so rarely fall foul of one another as to make no perceivable interruption in commerce; why then may not the little particles be allowed to collide so seldom as to cause no disturbance or interruption in the courses of nature.

Another difficulty springs from the extreme minuteness of those particles, which can hardly be thought capable of holding bodies together in such strong cohesion as we experience in metals: but let us remember that the momentum given by all mechanical powers is found by a compound ratio of their quantity of matter and velocity, so that any deficiency in the former may be made up by a proportionable increase of the latter. Nor need we wonder that very small agents should produce great effects, since we know that the burst of a cannon will shake a whole street, but

but the particles of air giving immediate impulse to the houses can scarce be supposed to weigh many grains. The like appears in explosion of gunpowder where the quantity of matter operating is a very trifle in comparison with the heavy masses it raises and compact bodies it rends. I shall only remark further that this subtile matter, being the cause of gravitation, cohesion, and repulsion, in other bodies, can neither gravitate, nor cohere, nor repel itself; because it will want a prior cause to give it those qualities: nor has it other power than that of impinging like a stone, by virtue of the prodigious velocity wherewith it darts along. Nevertheless, we may count it the primum mobile, or first material agent in all the operations of nature, as driving her two main wheels of attraction and repulsion, from whence all the lesser works, the power of salts, acids, alkalies, of fire, fluids, electricity, and magnetism, circulating vessels of plants and animals, spring; glues and menstruums derive their activity; according to their several structure and position of their parts fitted to turn the motion of those principal wheels upon them. Nor is it hard to conceive how two bodies may be made to attract by the action of this subtile matter, because they must cover each other from so much of the stream as they receive themselves,

selves, which would else have fallen upon the nearest sides of the others, so that this force being wanting to balance that on their opposite sides, they must necessarily be driven towards each other. Then those streams which fall very obliquely, like a cannon ball bounding from the ground, will drive off other bodies lying at a certain distance, from whence arises repulsion, which cannot take place between bodies too near together, because in that situation they cannot receive a very oblique rebound, for it must pass beside them. This likewise accounts for the inequality between the two attractions, that of cohension being found stronger than that of gravitation, because bodies cohering have the whole force of attraction without a competitor to keep them together, whereas those at a distance repel as well as attract, so that their gravitation is no more than the difference between those two counteracting forces.

5. But wherever the sources of this fund may lie, or how copious supplies soever they may contain, they cannot for ever answer all demands made upon them. We see bodies continually strike against one another, and when they do so, if not elastic, the motion of both ceases, or if elastic, the force whereby they rebound must be drawn from some such fund as that above mentioned: every time a man

man claps his two hands together he takes something from the stock of motion which is to carry on the operations of nature. But the collisions occasioned by human action are very trifles in comparison with that great quantity of force spent by nature in all her works: the bearing of rivers against their winding banks, the dashing of seas against the shore, the opposition of winds from one another, or from mountains, the systole or contraction of circulating vessels in animals and plants, but above all these the gravitation of bodies to earths and suns, the cohesion holding the little particles of compounds together, the opposition of centripetal and centrifugal forces keeping the planets in their orbits, the repulsion of air and ether, must make a vast consumption of motion every moment. So that the largest stores of force we can suppose nature once to have had must have been long since exhausted, as being subject to perpetual diminution without any means of recruiting: and all matter must have been reduced to a state of quiescence by this time, unless perhaps some few straggling atoms which might move about in spaces where they should meet with nothing to obstruct them.

6. Yet though the corporealists can find nothing to renew the decays of motion, we who claim motivity as an essential property of

of our own may fancy we find it in the action of spirit. Now should this be thought to serve for restoring motion it could not serve for beginning it at first: for we do not act without causes as well final as ideal, wherefore the activity of spirit is set at work by the perceptibility of matter and the modifications it falls into by the motion of its parts presenting us with the motives and guidance of our proceedings. For if nothing moved without us we should have no ideas brought us to perceive, and without perception there could be neither inducement to exert our volition, nor direction which way to turn it. So that upon either hypothesis we must needs adhere to our former conclusion, that every motion is the consequence and effect of some preceding motion, and that it must begin in matter before it can be produced by any such spirits as we have experience of.

7. And the like may be said of situation which follows constantly from some preceding situation. Matter is generally held homogeneous and that infinite variety of forms, constituting the essence of bodies falling under our cognizance, depends upon the structure and order wherein the parts of them are placed. So that the same first matter makes a stone or a metal, a plant or an animal organization,

ganization, according to the position wherein the several individuals of it are ranged. Thus all secondary qualities arise from order; neither a clock nor a tree would be what it is, nor could perform its proper functions, if the wheels or the fibres were placed in any other manner than they are: the faculties of sense, thought, and reason, could not subsist unless the spirit resided precisely in that spot whereto all the organs of sensation and reflection tend; and the modifications exciting our several perceptions vary according to the position wherein the component parts of our organs lie. And that particular forms of order generate one another we may be satisfied by the growth of vegetables, where the peculiar structure of the seed causes it to produce a plant of its own kind: and the structure of plants occasions them to yield flowers and fruits of various shapes, hues, odours and tastes. In these things we are ready enough to acknowledge an order, but as has been shown in CHAP. X. of the last volume, we do not so easily admit it in positions not corresponding with our trains of imagination: nevertheless, it has been made appear there that strickly speaking there is no such thing as disorder in nature, for every number of particles must lie in some situation with respect to one another, and that is their order however irregular

gular it may seem to our apprehension. Nor are those apparently confused positions unfrequently serviceable to produce what we call order, for the particles nourishing a plant lie undistinguished in the earth, the air, or the vapours, yet they must have an apt position there, or the plant could never draw them in to contribute to its growth. Thus in particular things their order does not depend solely upon the order they had before, but partly upon other things, which are or may be brought contiguous to them, or mingle among them. But the Universe, having nothing external, must receive its order continually from that it had in every preceeding moment; so that if the position of all substances could be known precisely at any given point of time, it might be determined from thence what position they would take at any time hereafter. For if it were known how the air, the mountains, the burning sands, the frozen seas, the subterraneous vapours and other causes affecting the weather, stand disposed, we might prognosticate what weather it would be to-morrow, or this day twelvemonth. Nor would the action of free agents disturb the calculation in changes of position wherein they are concerned; for if we could ascertain the exact situation of objects surrounding them and structure of their organs,

we

we might foresee what modifications these organs would fall into, what ideas and motives they would present, and consequently how those agents would act, and what alterations they would make in the position of bodies within their reach. But then in calculations of this sort the article of motion must not be left out of account, because it is that which generates one order out of another: nor is it enough to know the quantity of motion in the whole, but likewise among what particles it is distributed, and in what direction each of them proceeds; for it is obvious that the same motion in different directions must produce very different figures.

8. Secondary qualities, resulting from the order wherein the substances forming a compound lie situate, are continually destroyed and renovated according to the changes made in that order by motions of the component parts. But primary properties belonging to individuals admit of no change; for what has no parts cannot have an order of parts: therefore these properties, being not generated by motion or situation, must remain constantly the same in the subjects possessing them. Body will always continue solid and spirit perceptive, whether in motion or at rest, whether in this part of the world or any other, whether contiguous to other substances

or

or separate from them all. So that primary properties spring from no assignable cause among the powers of nature, as motion and situation do from former motions and situations.

9. But the inquisitive mind of man looks for something further, to account for the different properties of individuals; we find spirit active and perceptive, matter inert and incapable of sense, or should we fancy the atoms sentient, it has been shown the sphere of their presence would be less than that of ours: it is natural then to ask, why there should be such a difference in substances? why they are not all homogeneous and primarily alike? And these properties, being inherent in their natue and inseparable from them, must be as old as themselves, and consequently whatever occasioned the difference between them must have been the foundation of their existence. Nor will the mind be satisfied without a reason limiting the quantity of matter existing: there is no impossibility or absurdity in its being double, or treble, or decuple, to what it is, for there is abundant room for multitudes of atoms more in the empty spaces between those already in being.

10. Neither will there want the like questions concerning motion and order: for it will scarcely satisfy to tell us that every motion

tion and situation follows from a prior, that again from the next preceeding, and so backwards throughout all eternity; because if we contemplate a series of changes following one another, there will arise an order of succession as well as of position. In the effects we see produced, things pass out of one form into another through several intermediate changes: a seed cannot produce the full grown tree at once, but first shoots up a tender twig, which then becomes a sapling, a waiver, a tellar, and at last a perfect oak laden with acorns: a fetus grows through the stages of infancy, of childhood, of youth, unto the full maturity of manhood: and these gradations in the several productions of nature may be called their order of succession. Now if the situations of all the substances in the universe have followed one another for ever, there must have been an eternal order of succession prevailing throughout: but if it should be asked why some other succession might not as well have prevailed eternally, what shall we answer? for I know of no natural repugnance in things against taking any position or series of motions, but their changes might have succeeded for ever in a manner quite different from that they have done. Besides, there are some positions which never generate any others, and

and consequently produce no order of succession at all. Lucretius's atoms falling perpetually downwards with equal velocity could never have changed their order without his whim of a declination, for which there is no foundation either in experience or reason. Actual motion is not essential to any substances we know of, which therefore might all have remained eternally quiescent in their several stations: or if we will needs suppose them to move, it is most natural to conceive them all moving with the same velocity and direction, in which case they could perform no more feats than the Lucretian atoms. Therefore it remains to seek a reason for their having an eternal motion rather than an eternal rest, or for their escaping those unavailing similar motions which could produce nothing, and for their having eternally taken different directions, from whence flows that order of succession we call the course of nature.

11. Another question may arise concerning Time, why such a particular point of it must be the present. To-day must follow yesterday and precede to-morrow, this I know very well, but how know I that yesterday, to-day and to-morrow, might not have been long since past, or that they might not have been yet to come? Can we fix the beginning of eternity,

eternity, and compute how many ages have lapsed since then, so that the year 1761 must necessarily be the present year? That year follows year and the second precedes the third there is no dispute, but why might not the whole course of time have been anticipated or retarded, so that it might now have been the reign of Henry I. or George X. instead of George III.? We shall look in vain for a solution to this question in the properties of substances, the effects of motion, or the results of order.

12. Neither can we learn any thing from them to determine the original stations of particular substances in the universe whereon all their succeeding ones depend, which we shall want some cause to assign them. We may think this not worth inquiry with respect to matter, for it is all one whether particle A lie in the east and particle B in the west, or the contrary, the course of nature will go on the same, for either particle will answer the same purposes in either place: but with respect to sentient beings it is very material, for had I been stationed in some distant planet and some other spirit here in my room, though the course of nature and business of mankind would have proceeded just as it does, yet my own lot might have been very different: I might have had enjoyments

joyments now out of my reach or faln into disasters I now know nothing of. This consideration may put us upon searching for a reason, not only why all nature wears the form and follows the order of succession it does, but why each particular substance possesses its own place in that order and has not the place of any other.

CHAP. VIII.

CHANCE, NECESSITY, AND DESIGN.

THESE three have been severally assigned as the causes producing that order we observe in nature, and as they convey very different and opposite ideas we shall consider each of them apart. Some have laid great stress upon chance as being the original giving rise to the other two by strewing the particles of matter throughout infinite space, and throwing them into combinations from whence the secondary qualities of compounds necessarily result, and forming others into an organization rendering them capable of thought and design. And in our common discourses we speak of Chance or Fortune as a power

power influencing the affairs of men and having a principle share in the direction of all events: this is thought frequently to baffle the skill of the wise, the valour of the brave, and strength of the mighty, to turn the scale of victory, and determine the success of all enterprizes. But if we examine the proper idea of chance we shall see that it is neither agent nor power, nor has any other existence except in our own ignorance, but whatever is ascribed to that we might see performed by other causes if we had sagacity to discern them. Even in games at cards and dice we deal the one and throw the other ourselves, and both fall out according to the motion and position we have given them: but as we are not so perfect masters of our motions as to know exactly what they will produce, it is this uncertainty that makes the chance; for there are persons who have learned to pack the cards and cog the dice, and with such there is no chance what hand or what cast will ensue. It is remarkable that we sometimes know the exact proportion between our knowledge and our ignorance, which enables us to calculate chances with a very great nicety: but if there were a person who could discern minutely the little inequalities of the table you throw upon, the roughnesses of the box, the vigour of your arm, the degree of confidence or distrust with which you

you throw, and all the ideas rising in your fancy, he would make an other-guised calculation than our common gamesters. Therefore chance is relative, being greater or less, or none at all, according to the degree of knowledge in different persons: an event of which there is very little chance to one man, may be probable to another, and inevitable to a third, according as each stands in a situation to discern the causes operating to produce it. To him that sees two hands at whist, there is less chance on which side the odd trick will fall than to the players: if he look over all the cards, he may still give a shrewder guess; and if he knows exactly each person's manner of playing, he may compute, without hazard of a mistake, how much will be scored that deal.

2. What is done cannot be undone, therefore a power once executed, ceases with respect to that particular event, wherewith it has no longer any concern: whence we may learn that the power of fortune is only ideal, because in many cases we suppose that remaining after determination of the event imagined to depend thereupon. When a merchant risks his all upon a venture to some distant part of the globe, we say he puts himself under the power of fortune, because the casualties of winds and seas, of fire and

enemies, are supposed to lie at her disposal: but what if this merchant sells his venture to another after the time lapsed in which the ship must have succeeded or absolutely failed in her voyage, but before any news of her can be arrived home? does not the purchaser put himself as much under the power of fortune? But if fortune had any power during the voyage, she has executed it, and has nothing more to do, nor is there any chance of the success falling out otherwise than it has fallen. Nevertheless, because we know not the event, we still apprehend ourselves under the power of fortune: for when advice comes of the ship being arrived safe, the cargo advantageously disposed of, and the money deposited in safe hands, then, and not before, we conceive the power of fortune determined, and ourselves secure against her caprices.

3. Thus chance is no cause of any thing, but serves only to express our ignorance or uncertainty of the manner in which other causes operate; therefore may be properly applied to the most cogent necessity, or most deliberate design, where we know not the tendency of the one, nor purpose aimed at by the other. What is esteemed more casual than weather? yet nobody doubts of the air moving, the vapours rarifying, or the clouds condensing,

condensing, according to a certain impulse received from mechanical causes: but because no mathematician nor naturalist can investigate those causes, so as to calculate what they will produce, therefore we say, the farmer depends upon chance to bring his corn to maturity, and give him a favourable season for harvesting it. So likewise to us who are not in the secret, it may be matter of fair wager whether the council will sit on such a day, whether they will send more troops to Germany or agree to a cessation of arms, nor would the chances alter, though the whole wisdom of the nation were to be consulted in determining these points: and if our stake were very considerable we should as much put ourselves under the power of fortune, as if we had ventured upon the cast of a die, or a lot drawn by a child, or the choice made between two crumbs of bread by a sparrow. So then an event happening by chance does not exclude the operations of necessary causes, nor the acts of free agents, nor the provisions of wisdom, for the effects of all three will be casual so long as we cannot foresee them. And though it must be acknowledged, that fortune has a great influence upon all our affairs, no more is to be understood by this expression than that we know not what

causes are in act around us which may affect the success of our measures.

4. It is not uncommon for words to take a little different signification, according to the phrases wherein they stand: it is one thing to say there is a chance of an event falling out so or so, and another to say it was an effect of chance. How ready soever you and I might be to lay a wager upon the meeting of the council, as deeming it a casual event, we shall never think the members meet together by chance, taking it for granted they have some reason either for going or staying away. So if we see a mathematician busy in drawing figures upon paper, though we may offer to bet with one another whether he will make a circle, a parabola, or a parallelogram next, we shall hardly imagine he constructs his schemes by chance. So likewise, if lightning falling upon an oak, should tear it into shatters, though it fell by chance upon that particular tree, there was no chance against its rending asunder whatever it should light upon, nor was there any chance of its not bursting from the clounds when the air was in a disposition to produce it. Since then among events we cannot foresee, we distinguish between those happening by chance and those which do not, it will be proper to examine what we understand

stand by this distinction. In effects produced by necessary agents we esteem those casual which depend upon other causes besides what fall under our cognizance: when we see water poured upon a rising ground, we know it must run downwards by its natural gravitation; but into what streams it may divide, or in what meanders it may wind, is casual, because depending upon the inequalities of the ground, and obstacles lying in the way, of which we can take no accurate account; but still there must be water poured, and gravitation pulling downward, or no stream or meander could ensue. In the works of design, it is common for other effects to follow besides those intended: a man walks along meaning only to get from one place to another, but in his passing he treads upon a snail, this is casual, because he had it not under contemplation, nor was it any part of his design; but he must have had some purpose in view, or he would not have walked at all, and the snail remained safe. So then in both cases, chance has no place, unless there be some agent at work, some power in act, from whose operations chance may produce something that was unforeseen or unthought of. Therefore those who pretend the world was made by chance, or assign that for the beginning of all things, talk absurdly; for there must always

always be something in motion previous to chance, nor can this begin until there be causes operating, of which it may be a chance in what manner they will operate. Besides, if we consider the source of chance itself, we shall find it always arise from the situation of things which may interfere with those at any time under contemplation: for upon seeing a body move, or knowing the purpose of a free agent, there is no chance what will ensue supposing all obstructions removed: but we have seen in the last chapter, that every situation follows upon a preceding situation, therefore, if we could know compleatly the motions, the purposes, and situations, of all substances in the universe, we might learn from thence the order of succession, and should see there is no chance of any thing that could happen.

5. I proceed next to Necessity, with which I shall have less to do, as being a more stable term, appropriated chiefly by the studious, and so not subject to the usual variations of vulgar language. Our idea of necessity we take from the action of bodies, which have no force of their own, but transmit that they have received from one to another: even resistance, although inherent in body, can effect nothing without an external impulse. So that necessity cannot be assigned for the ori-

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gin of things, because itself must have a beginning in the previous condition of things from whence their operations may be necessarily inferred, for no effect is necessary until there are causes at work fitted to produce it: therefore, necessity is at most but a channel of conveyance, transmitting efficacy from cause to effect, and even this purpose it will not answer compleatly, having no fund to repair the loss of motion, continually occasioned by the collision and pressure of bodies. We may then admit this as one of the laws by which nature preserves the tenor of her course; but can by no means employ it to account for the present order of succession, be it eternal or no, taking place preferably to any other, or to those unavailing situations which could have produced no succession at all.

6. Nor shall we find less difficulty with Design, such as we have experience of, for reason requires materials to work upon, and intelligence cannot subsist without objects previously existing to be understood. Something must suggest the design, and present ideas of the means tending thereto before we can enter upon the prosecution. So that what power soever spirits may have to renew the perpetual decays of motion, and carry on the order of succession, their action cannot account for there being such an order: because

cause there must have been some previous situation of matter before that action begun, exciting perceptions which gave occasion to their exerting this power.

7. And as we have found these three causes insufficient to account for the order of succession in the situations and motions of things, so can they as little account for that third part of nature, the primary properties of substances: for those are not the consequences of prior properties or positions, but coeval with the subjects possessing them. They cannot spring either from necessity or design, to both which they gave birth: for the necessary agency of matter results from its solidity and inertness, as design does from the perceptivity of spirit; and chance lies still further remote, having no place until necessity or design have begun their work. Neither will the contemplation of these causes furnish us with an answer to the queries before proposed concerning the course of time, why it might not have run earlier or later than it does: nor concerning the particular stations of sentient Beings, why each possesses the place it holds among the whole number, and so receives that series of perceptions which might as well have fallen upon another standing in its room.

CHAP. IX.

THE FIRST CAUSE.

Thus having examined all the powers and properties of nature, so far as they fall under our cognizance and observation, we find that the contextures, qualities and operations of particular things, follow from prior situations and motions, these again upon others preceding, and so on without limitation in a continued chain, whose links we cannot number, and whose length we cannot measure. When we endeavour to account for the whole chain, whether finite or infinite, hanging in such a particular manner rather than any other, or being connected in links at all, and consider the general causes hitherto assigned for that purpose, we find them ineffectual, as taking their rise from the positions and qualities of substances existing before, and therefore themselves the effects of some preceeding cause. When we reflect on the different primary properties of substances, which are essential to them and inseparable from them, and yet require a reason occasioning the difference, we must conclude that the cause, which made that difference, gave

gave them likewise their existence, and at the same time appointed them their several stations; for these too require a cause, every station being naturally indifferent to receive any particular substance equally with any other, and each substance having had some station in every point of its existence. But this cause we have no direct knowledge of, as we see none of its operations; wherever we look around us, we discern nothing at work besides chance, necessity, and volition: neither our senses nor our thoughts can pierce to the end of the chain, nor can we contain the whole of it in our imagination: we have no remembrance nor experience of an existence given together with primary qualities, nor of a substance which had no place in nature first taking its station. From whence we may rationally infer, that all the causes operating to produce the phenomena within our notice are themselves effects of some prior cause, of which we can know nothing more than may be gathered upon the evidence of those effects.

2. There is not a more evident truth or more universally acknowledged among mankind than this, That nothing can produce nothing: therefore if there ever had been a time when there was no Being in nature there could have been none now, and the bodies we

we daily see and handle are an irrefragable evidence to us that something has existed from all eternity; because either they themselves did so, or they were called into being by what was existent before them and had nothing prior to itself. Thus we must needs acknowledge there is a Being somewhere existent without a cause, for till we find such an one we shall have no cause whereon to found the existence of other things: and such we may safely assign for the First Cause of all existencies, modes of existence, properties, and order of succession in the universe. To this species of existence we commonly apply the terms Self-existence and Necessary-existence, rather for want of properer than for their being fully expressive of the thing understood by them: for self-existence literally implies something that was not, but assumed a being by its own power, than which no imagination can well be more absurd: but we mean by the expression a Being underived and unproduced either by itself or any other, or in other words, existing perpetually without a cause. I will not undertake to expound the term Necessary, having but a confused idea of the import it carries in this place: it cannot mean a Being that has no power to lay down its existence: for in this sense you and I, the dog and the chimney piece, are ne-

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cessary beings, because we can none of us annihilate ourselves, or cease to be: but Necessary, I take it, stands here in opposition to Eventual, as not depending upon the concurrence or operation of other causes, and so amounts to the same as I said before, a Being perpetually existing without a cause.

Nevertheless, we have observed formerly, that one may pronounce some things clearly concerning confused ideas: therefore how obscure soever the term may be, we may affirm without hesitation, that it cannot be local nor temporary, for we cannot conceive such a difference in places or times, as that a Being should be necessary in one spot or year, which is not necessary elsewhere or other when. Therefore bodies are not necessarily existent because we see that any place may be without them, but if there were an absolute necessity, independent on any cause, that yonder rolling stone should exist where it is, it could never be removed therefrom: and the same necessity would require its existence in the next adjoining place, and so in every other, until the whole universe became one enormous mass of stone. For whatever has necessary existence at any time or any where, must have it always and every where, throughout the whole extent of time and space.

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3. But though the existence of the First Cause be necessary, its operations are not so, for necessity always proceeds uniformly under the same circumstances: wherefore the variations of nature may convince us, that there is a choice belonging to the First Cause determining the precise number of substances, allotting them their primary properties, stations, and motions, assigning their positions with respect to one another, and so ascertaining the particular order of succession which constitutes the course of nature. For we cannot conceive otherwise of Non-existence than as alike indifferent to take Being or remain in nonentity, or to receive any properties and modifications that shall be given it: nor of the First Cause otherwise than as proceeding by choice, determining where and in what manner they shall be given. This choice we must call Intelligence, for want of a properer appellation, though very different from our own understandings, which how improved soever, could never act as a first cause, because they do nothing without previous motives, and ideas derived elsewhere: and from this Choice or Intelligence the First Cause is denominated God. For I take the point of intelligence to make the fundamental distinction between theists and atheists: all who hold the world

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and the affairs of men governed by a superior wisdom and foresight, whether they conceive it residing in one or in many, whether limited in their powers and prescribed to by the laws of nature, or even if they suppose them generated and perishable, must be allowed to believe a God. On the contrary, how highly soever any may think of the eternity, self-existence, and efficacy of their first mover, yet, while they ascribe its operations to unthinking chance or blind necessity, they cannot escape the charge of atheism.

4. Besides, it seems incongruous to reason, to imagine that any cause should give active powers, unless it has the same or greater within itself. A man indeed may beget a son that shall far outstrip him in understanding and quickness of parts, but then there are many other causes concurring to the production of a child besides the father; but that a sole cause working on no pre-existing materials should do this, is inconceivable. Since then we find a degree of intelligence, prudence and forecast in ourselves, we can with no colour deny the same to the origin from whence we sprung. He that made the eye, shall not he see? he that formed the ear, shall not he hear? and he that gave man knowledge, shall he not understand? Our own perceptions indeed come to us from without,

without, but we may consider perception in the mind as a different thing from the modifications of our organs immediately exciting it: we may then conceive the like and other perceptions in God, without the adventitious helps we stand in need of to strike them upon us; or if he have not perceptions of the same kind with ours, we must suppose him to have something else which answers the purposes of them more effectually.

5. Nor is it a contemptible argument for the Being of a God which is drawn from the universal consent of mankind: for our reason when proceeding most carefully being liable to error, we gain a greater confidence in it upon finding it confirmed by the opinion of others, and the more general this confirmation is, the stronger assurance we shall have of our being in the right. But the force of this argument has been invalidated by alledging that far the greater part of mankind take their opinions upon trust, and that crafty persons have found an interest in leading the world into the persuasion of a superior power they did not believe themselves. Therefore to avoid this objection, let us consider the sentiments of those only who have been most careful to judge for themselves, and we shall find them agreed in the course of their reasonings, but some few led to dissent from the rest

rest by their misapprehension of a point of fact, which I conceive may be determined by our experience and observation. The atheists, I believe, to a man were all corporealists, holding no other substance in nature besides matter: and though they could not but acknowledge a sense and understanding in themselves, which was wanting in the stones and clods of the earth, and the most curious works of art, yet they supposed those to be secondary qualities, resulting from an organization wherein the particles of matter were disposed. The Hylozoists indeed, by Cudworth's account of them, ascribed a little more to their atoms, imagining them endued with a quality which, though not perception, might be styled the seed or principle whereout by the junction of many of them together perception might be compleated. Thus both conceived perceptivity to arise from a certain combination or aggregation of imperceptive particles, and that there was nothing existent which was not originally and separately imperceptive, that is, corporeal.

On the other hand, none who admitted perceptivity as a primary property, or held immaterial substances uncompounded of matter, ever denied a God. And it may be remarked for the credit of the spiritualists, that they were more unanimous upon this arti-

article than the materialists: for though the stoics, according to Cudworth, must be ranked among the latter; they were so far from atheism that they run into the contrary extreme and all the superstition of dreams, omens, auguries, with other methods of divination: and indeed, if a composition of mere matter consisting of flesh, blood, and fibres, may form sense and understanding in man, it will be hard to shew that other compositions may not do the like, or that the order and composition of all matter which we call the Universe may not as well produce a superior intelligence. So Bolingbroke, whom, from his deriding the doctrine of spiritual substance under the name of the pneumatic philosophy, we may pronounce a corporealist, nevertheless acknowledges a God: for catching hold of Mr. Locke's notion, he would have us believe that God has annexed the faculty of thinking to that system of matter composing our human frame, so that upon the dissolution of our system we must lose our faculties, our existence, and our personality. But the spiritualists, however varying in other respects, have never disputed the being of a God: some few of them, as Berkeley, have denied the existence of body, the reality of space, distance, time, and all external objects, but then they attributed our perceptions to an

immediate act of God impressing ideas of them all upon our minds. Thus we see the matter reduced to this single question, whether perceptivity results from a combination of matter or is a primary property in the subject possessing it: for which reason I have been the more careful in the foregoing chapters to suggest what observations I could think of for showing our distinct existence, individuality, and personality, together with the difference of primary properties between spirit and body: for these facts once well established we shall have the unanimous consent of all serious and thinking persons to conclude from thence that there is an intelligent cause of all these things. Besides, if there were nothing but matter there could no more be activity than perception, for all exercises of activity contain something of motion, but supposing matter to have a power of moving, yet being indifferent to take any direction and utterly destitute of choice, it must exert that power every way alike, which consequently must destroy its own operations. A body in this case would be like an iron plate, tied by many strings drawn extremely tight to all sides of the wainscot, which must hang motionless in the air although continually pulled with a mighty force, each opposite string counteracting its antagonist, unless you suddenly cut the

the strings on one side when it would fly violently towards the other where they remained whole. But matter thus propelled to all quarters by its inherent power would want a preference to cut off its impulse on all parts except one, in order to produce a motion that way. Add further, that what has been offered concerning the stationing of substances, the appunctuation of time, and perpetual order of succession, might serve to confirm the same conclusion, if it stood in need of a confirmation.

6. There are people who puzzle themselves with nice speculations concerning space, which they will needs have to be necessary because we cannot conceive it non-existent, nor any portion of it removed, nor other substances to exist without a place to contain them. But how much soever we may suppose space necessary, it does not affect the foregoing argument for an active intelligent cause, for space understands nothing, does nothing, and produces nothing, but is perhaps the most unmanageable idea in our imagination: the most sagacious of us know not whether it be substance or accident, whether finite or infinite, whether one continued thing or consisting of parts, nor whether those parts be determinate points or infinitely divisible; for suppose a particle in the circumference of a

large wheel to move only from one point to the next, what must the particles lying near the centre do? for they all move at the same time, but they cannot move a quarter, nor a tenth, nor a hundredth of a point. The like difficulties might as well be started upon time, whereof we cannot conceive an utter absence, nor can the future be made to precede the past, nor can any substances nor even space exist without a present moment for them to exist in. But time was never yet suspected of being a substance, and though we talk of its producing great events, this is only a figurative expression denoting that it gives scope for other agents to work in. Wherefore, these speculations concerning space and time make no advancement in our knowledge, but only serve to convince us of the imperfection of our faculties, which cannot fully comprehend the nature of every thing whereof they can entertain ideas: nor do those who employ them pretend to draw any certain conclusions from them, but only throw them out as a rub in the way of their adversaries. I never heard of any who were converted to atheism, by contemplating the necessary existence of space, but being first prepossessed against the admission of one active, intelligent, and self-existent cause, they endeavour to perplex the question by suggesting

ing another Being alike self-existent and necessary: so that this is an after-thought, not weighing with them in their determination, but used only, in the schoolmen's phrase, as an argument to the man. We discern neither time nor space by our senses, they being ideas of reflection gathered from the situation of objects and the successive changes observable in them. We find the idea of both necessary to the existence of substances, and if we suppose those substances annihilated, still the idea of that space and time wherein they might have existed remains: if we go to imagine those again annihilated, it will amount to the supposition of a place wherein there is no place, and a time wherein there is no time, which is contradictory: but this depends upon our conception which cannot penetrate so thoroughly into substances but that they may exist in a manner we cannot conceive. We have seen that time requires a cause to determine what particular point of it shall be the present: and if space be any thing real or more than a mode of existence in other things, it likewise requires a cause to assign it properties distinct from those of body and spirit. Nor should I be singular if I were to suppose both time and space receiving their reality from the First Cause, but having so firm an establishment given them that we can neither

neither by experience discern, nor in imagination conceive, their non-existence.

CHAP. X.

INCOMPREHENSIBILITY.

PERHAPS there has been no transaction throughout all history more frequently quoted in theological treatises than the conversation of Simonides with king Hiero, who desiring him to explain what God was, Simonides asked a day to consider of it; at the end of this day, instead of giving his answer, he asked for two more, and when these were expired he requested four: for, says he, the more I consider the subject I find the difficulties double upon me. This answer of his being so frequently taken notice of, shows how well it tallies with the sentiments of all who have turned their thoughts upon the like contemplation. Nor is there any wonder that it should, for we knowing nothing of causes unless by their effects, seeing none of the immediate operations of the First Cause, and being confined to a narrow corner of nature, cannot expect to have a full comprehension of the Author of Nature, from whom flow many other effects besides those falling within the reach of our observation. We have just now seen insuperable difficulties

ties in the contemplation of time and space, we have before met with the like in the divisibility of matter, the propagation of force from body to body, and have found mysteries in the action of our own minds, which must proceed always upon motives and ideas, and yet we have no idea of those fibres or other parts of our organization which are the immediate subject of our action. Since then we lie involved in obscurity with respect to our very selves and the objects most nearly surrounding us, how can we attain a perfect knowledge of that cause concerning which we know nothing more than can be gathered from those materials? The very idea of a First Cause is unsuitable to our imagination, for we see all things proceed in a chain wherein there is nothing first, each cause being likewise an effect of others preceding. Nor can we, who are confined to certain measures in our conceptions, comprehend that wherein every thing is infinite as having nothing external to limit it. But since our ideas and our language are taken from objects familiar to our experience, it is unavoidable that we must think and speak very imperfectly of God.: the terms we employ are for the most part figurative, containing some remote similitude, but not fully expressive of the thing we would signify.

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2. We hear it currently asserted that God is a spirit, nor do I find fault with the appellation, as having no properer to substitute in its room: for we know of no more than two substances, Matter and Spirit, therefore since we are sure he is not matter nor contains any material mixture we can call him no otherwise than spirit. But we cannot suppose this an adequate term, for we may discover so much of him as to show that he is as different from the spirits of men as they are from matter. We know that our own spirits are moveable and passive, residing in some particular station and confined to objects touching the sphere of our presence, receiving an impulse from that matter whereto we are vitally united, transferring us from place to place, necessarily affected with pleasure, pain, and other perceptions, by the various play of our organs, extremely scanty in our knowledge, liable to error and delusion, and never exerting our activity without ideas to instigate and direct us: none of which particulars can be ascribed to God, whom we must therefore acknowledge a Being of his own kind not to be ranked in the same class with any others.

3. So likewise when we declared God intelligent, it was because we had no other word to express our meaning by, for if we had

had declared him non-intelligent, it would have conveyed the same idea we have of senseless matter, acting necessarily by transmission of impulse, and therefore by no means capable of being a first cause. He that made the eye, shall not he see? and he that formed the ear, shall not he hear? but those who propounded these questions never intended to represent God as provided with optic and auditory nerves, or receiving sound and vision in the manner we do. So likewise if we go on to ask, he that gave man knowledge shall not he understand? neither does it follow that understanding is the same in him as it is in us: for the thoughts of God are not as our thoughts, nor his ways like our ways. We understand by organs of sensation and reflection, by traces lying in our memory, and slow deductions of reason: nor could we understand any thing unless there were something exterior to be understood; or how much soever we may fancy ourselves containing our stores of knowledge within ourselves, they were first deposited there by objects striking upon us from without. Divines tell us that God is a pure act, by which I suppose they mean that his acts contain no mixture of passion, nor require materials or instruments to make them take effect as ours do; for we cannot act without organs of motion, nor

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subjects to receive our action, nor ideas to determine our volition: but in creation God acted upon Nothing, without instruments to assist, or objects to direct him in the execution. I must own this pure agency is to me an inexplicable idea, yet is this no reason for rejecting it: for we have found upon a careful survey of nature, that all substances and operations conceivable require a cause to assign their several stations, properties, and directions; but this cause must necessarily be inconceivable, for else there would be something conceivable that did not require a cause, which is contrary to the result of our survey taken from experience and reason, the only two sources from whence we can derive any knowledge.

4. Nor was it ever controverted among theists that God is incomprehensible, being of a nature peculiar to himself, and different in species from all other substances. It has been said that man was made after the likeness of God, but this likeness prevails no otherwise than our being less dissimilar than the stocks and stones we toss about; just as the top of a mole-hill is nearer the sun than the bottom, and therefore resembles that glorious luminary in being raised above the surface of the earth: for we cannot imagine but that the faculties and operations of man differ

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in kind as well as degree from those of his Maker. Perhaps it might be said with more strictness of truth, that the idea of God is taken from the likeness of man, for our conceptions being all derived from ourselves and the objects affecting us, we can form none other than what is made up of materials furnished us by our experience and our reflection. Therefore we select whatever powers and endowments we can find among ourselves, separating from them all we deem a weakness and imperfection, and heightening them to the utmost pitch imagination can reach, the aggregate of all these makes our idea of God: whose image it is no wonder we resemble, the features of it being formed from archetypes in our own mind: nor are we without excuse in taking this method, as being the only one in our power to take. But a similitude employed from mere necessity will not justify us in pursuing it too far, nor drawing the conclusions we might do if we had a clear and perfect knowledge of the subject. Wherefore I can see nothing in the doctrine of likeness warranting those high-flown expressions used by some, that the soul of man is a ray and emanation of the divinity, and that God has communicated some sparks of his own perfections to us, or that the divine intelligence is no more than perfect

fect reason, proceeding in the same manner with ours, but having a larger field of premises to work upon.

5. From this inability to apprehend the divine Being, any otherwise than by ideas taken from ourselves, it follows that our conception of him must be very imperfect, and what is worse, frequently erroneous: for we are not always competent judges of what is power or weakness, but often mistake the latter for the former, which induces us to ascribe our own passions, frailties, and imperfections to God, under the notion of excellencies. And this may plead some excuse in extenuation for the atheists; for perhaps the description which any man would give of the Supreme Being, might be demonstrated in some parts of it impossible and inconsistent: besides that the ideas sometimes inculcated by designing persons for their private ends and those entertained by the vulgar are manifestly absurd. But it is no rule that a thing may not be true, because some on purpose, and others by mistake, have blended it with a mixture of falsehood: wherefore it would become such as profess a freedom of thought and due exercise of their reason, to examine whether every thing suggested concerning a Deity be without foundation; for there is no reason to reject the whole of an opinion.

opinion, because the frailty of man has grafted some inconsistencies upon it.

6. For how incomprehensible soever the divine nature may be, there are some propositions we may affirm with certainty concerning it: nobody can doubt that the power of God is the same in America as in Europe, the same yesterday and to-morrow as to-day, that he was not born of parents, is not nourished by food, nor shall grow old and decay like ourselves; that all created substances take their stations, from whence fortune arises, by his appointment; that the order of succession, which is the course of nature, proceeds according to his direction; with many other the like assertions which need only the proposing to be assented to. Let us then endeavour to collect what we can discover clearly concerning the divine nature from such observations as we are able to make upon the things about us upon the best exercise of our reason, which though small in quantity may prove sufficient for us to draw any inferences therefrom that we may want to regulate our present conduct, or ascertain our future expectations; leaving all unavailing speculations for the amusement of those who may want something better to employ their leisure.

CHAP. XI.

UNITY.

THERE will be little room to expatiate upon this article, it being too clear to admit of a proof: for it seems a self-evident proposition that the First cause must be One, because if there were more they would want some prior cause to assign them their several stations and properties. And indeed this point with respect to the active cause has never been doubted of, unless by Zoroaster and the Magi, together with their followers the Manicheans: for the heathen polytheism was no exception, their gods being no more than celestial men with a little larger powers than those upon earth, but limited in their provinces, confined in their operations, and subject to the infirmities and disappointments of men. Besides, this was only a popular persuasion, never gaining credit among the studious.

2. We hear the Stoics speaking of the sun, the moon, and the stars, as so many gods, but then they did not understand the term in the same sense as we do now; for they held them to be animals having a superior intelligence

ligence to man, and moving in their courses by their own energy, but created Beings subordinate to the supreme God, the governor of all things, whom they supposed to be the Universe. How they could imagine God a compound consisting of so many parts as there are substances in the world, which is making many to be one, we need not now enquire: for whatever notions they held inconsistent with unity, they did not see the inconsistency, and therefore we cannot deny them orthodox upon this article.

3. Some of the ancients assigned two causes concurring to the production of all things; Thales, Mind and Water; Anaximenes, Mind and Fire; the Stoics, God and Matter, to which they might as well have joined Space and Time if they had thought of them: but then they held their active principle to be One, and the others purely passive to take such forms as should be impressed upon them. Plato and the Pythagoricians asserted the eternity of ideas and forms, the former of which served the Deity for a plan guiding him in his works, and the latter to constitute the essences of things by being applied to Substance, of which they seem to have had a more confused idea than Mr. Locke or myself, for one knows not whether they conceived it as having an existence of its own,

or

or receiving it from time to time upon the application of form. Our modern free-thinkers talk confidently of a nature of things, eternal and unalterable, controlling the Deity, so that he cannot do this or the other, but as that shall permit him. I wish they would explain what we are to understand by this nature of things, with which they seem to be so well acquainted, as to tell us precisely what it will require upon every occasion: by their manner of speaking, they seem to make it another cause independent on the First; or rather make the First Cause dependent upon this for the measures it shall take; for they say God would be more beneficent and merciful than he is, delivering us from our vices with the miseries consequent upon them, but the nature of things will not let him. How they would avoid the imputation of two First Causes I know not, for they deal altogether in objections, and are wisely cautious never to give us a compleat creed of their own, lest there should appear more holes in it than they can pick in any other. But the ancients, holding the eternity of forms and ideas, supposed them subsistencies inexisting within the divine Mind: what is the proper import of Inexisting, or the distinction between a Subsistence and a Substance, I shall not pretend to explain, having

having no clear apprehension of it myself; but I think the invention of these terms show that those who employed them found it agreeable to their reason, that there should be nothing external to the Supreme Being which was not produced by his own power, and consequently that the First Cause should be one sole and simple substance.

4. The difficulty of imagining good and evil to proceed from the same cause induced the Magi to suppose two principles, one to be the source of either: but then greater difficulties will arise upon such a supposition. For the primary properties of substances must be given them together with their existence, nor can we conceive such a property superadded to what had it not in its nature before: now the capacity of receiving pleasure or pain, satisfaction or uneasiness, in spirits, is the foundation of all the good and evil befalling them, and had they not been endued with such capacity there could have been neither, but had they been rendered capable of uneasiness only, there could have been no good, or of satisfaction only, there could have been no such thing as evil in the universe. But we cannot suppose two opposite principles should concur in one operation, nor, could they agree so far, is it conceivable creation should be the joint work of several agents. I know that

many workmen may join in the productions of art, for these being made up of pre-existent materials, and compleated by piece-meal, each may take in hand some of the several parts, while others work upon the rest; but creation is a single act, instantaneous and admitting no gradations, so that were there a hundred creative powers, the primary qualities of each particular substance must proceed from the same cause, and be received at the same time with its existence. Nor did the Magi themselves imagine otherwise, for they attributed the creation of sentient Beings to Oromasdes, who made them capable of happiness, wherein they would have continued without intermission, unless Arimanius had introduced disorders and mischiefs among them. But his malicious purposes could have taken no effect upon Beings that had not likewise been capable of misery. So then the difficulty remains entire as before, because the good principle must have furnished his antagonist with fitting subjects to wreak his malice upon, and concurred in the production of evil, by giving his creatures a capacity of suffering by it. I do not know whether this argument against the duality of principles has been employed before, nor was there any need of it; for the absurdity of two first causes, which must require another prior

prior first to determine the difference of properties and extent of powers between them, was so glaring, that it has quite exploded that notion off the stage: nor are there any now carrying their thoughts so high as to a first cause, but what are satisfied of its individuality and unity.

5. But our knowledge of the Being and unity of God will avail us little, unless we can gather something concerning what he is. Now the knowing what any substance is, implies our knowing the qualities belonging thereto, its manner of existence, and particularly whether it may stand so circumstanced as to affect ourselves, for else all the rest would terminate in mere speculation. But qualities and modes of existence, when applied to God, are termed attributes: these then I shall endeavour to investigate so far as I can find a solid foundation in the phenomena of nature, and clearest deductions of reason. For I do not pretend to give an exact description of what is incomprehensible, nor do I design to pursue my enquiries further than my own line of conception shall reach, leaving all beyond with an acknowledgement of my ignorance: neither would I proceed upon a fondness to gratify my curiosity, but with a sober and earnest desire of so much understanding

in the divine attributes, as it may concern myself and my fellow-creatures to attain.

CHAP. XII.

OMNIPRESENCE.

LITTLE need be said in support of this attribute, which is inseparable from the idea of necessary existence: because, as we have remarked before, there can be no such difference in places as that what is necessary in one spot should not be so elsewhere. And this holds good as well with respect to a particular substance as to a species: therefore there cannot be many necessary substances, though of the same species, because each being absent from the places occupied by the others, there is no other necessity for their being where they are, unless what is brought upon them by a superior cause assigning them their several stations. Therefore whatever has necessary existence any where, must be One in number as well as in kind, and exist alike everywhere throughout all the immensity

sity of space. Nor is there any variance of opinion upon this article, all who acknowledge God, the cause and fountain of all things, believe him to be one pure, undivided, unbounded substance, prevading, containing, and co-existing with all the things he has created.

2. It must be owned this is an incomprehensible idea, too large for our imaginations to grasp, therefore no wonder we find difficulties in it: but these arise all from our narrowness of conception and not from any shadow of positive proof that can be produced against it. For no man ever attempted to show the limits that might circumscribe the divine essence, or point the place from whence it might be absent. But it is hard for us to reconcile omnipresence with individuality, because all the substances falling under our cognizance having a locality, we cannot conceive the same thing present at immeasurable distances unless successively by removing from one place to another. Large bodies we can apprehend taking up a large compass of space, but then the several parts of them occupy their several points; and body being the only object familiar to our senses we take our idea of occupancy from that. Wherefore some I have met with object, not as an argument overthrowing omnipresence, but as a dif-

a difficulty wanting solution, that we seem to make God extended, and consequently consisting of parts, because it is the accession of parts that extends every thing we know of into magnitude. But how are they assured there can be no extension unless by means of parts? even in matter we have already found infinite divisibility so inconceivable, and the difficulties on either side so much wanting a solution, that the most sober and judicious persons have foreborn to decide peremtorily upon it: and in our own spirits we have found an extension of another kind, for our sense assures us of our individuality, and daily experience furnishes us with reasons which to me carry the force of demonstration evincing a sphere of presence, in every part whereof we are actually existent and perceptive, because receiving sensations from a variety of objects at the same time; but neither can the same particle of matter conveying our sensation take various modifications at once, nor can many particles act together upon a mathematical point. And this experience of our own undivided extension may a little help our comprehension of omnipresence, for though we cannot make a new idea we may compound and enlarge those we have in store. Our own manner of existence in a sphere or portion of space sufficient to receive the action

tion of many corporeal particles, we may term a totipresence throughout the contents of that sphere; we may then conceive another substance totipresent in a sphere of an inch, an ell, a rod, a mile, and so rise by degress to the greatest extent we are able to contain in our imagination; and a totipresence throughout all immensity amounts to the same as omnipresence.

3. But we are unable with our utmost efforts to conceive an immensity of space, much less omnipresence wherein that idea is contained, nevertheless, what we cannot apprehend at once or in the gross, we may by piecemeal: whatever portion of space we fix our thoughts upon at any time we may conceive God to be there, and thus soar from height to height, with a denial of his absence from every point in the progress of our contemplation. And this method has been recommended of old: "Whither shall I go from thy spirit, or whither shall I flee from thy presence? If I go up into heaven, thou art there: if I make my bed in the grave, behold thou art there. If I take the wings of the morning and dwell in the uttermost parts of the sea; even there shall thy hand lead me and thy right hand shall hold me." To which we may add from ideas suggested by modern discoveries: If I follow the planets

nets in their orbits, I shall find thee directing their courses: if I enter the assembly of fixed stars, there art thou holding them in their stations; if I penetrate the minute fibres of vegetables or examine the little corpuscles of air and ether, there art thou also marshaling their order and invigorating their motions. Thus, though we cannot comprehend God absolutely everywhere, we may comprehend him wherever we can think of: this is an idea easy to our imagination, involving us in no perplexities of an extension without parts, and this we may satisfy ourselves with as being enough to answer all our useful purposes.

CHAP. XIII.

ETERNITY.

No proof seems requisite to establish this point, it being self-evident that something must always have existed, and what can that be besides the First Cause from whom all things else received their being? Nor can we find a difference in times any more than places with respect to necessary existence, but what

what was once and any where necessarily existing must be so always as well as everywhere. And the same rule extends to the attributes as well as the existence of God; for if there were a time when he was without any of them, I know not where he could have acquired them, or from what sources derived them. Therefore eternity infers immutability, nor was ever separated from it in the minds of men: for all who believe a God, believe not only that he always was, but likewise that he continues, without variation or shadow of change, the same yesterday, to-day, and for ever.

2. I know not how we can conceive otherwise of eternity than as a succession of time, with a negation of beginning or end. But the schoolmen are not satisfied with this idea, for they look upon succession as a continual perishing and renewing of things existing in that manner: for I am not and perceive not yesterday, the existence and perceptions I had then being lost and gone, and those I have now being new ones, such as I had not then, but are brought me by lapse of time; yet my yesterday's existence was the cause of my present, for if I had not been then I should not have been now: which manner of existing they think unworthy to be ascribed to God, as wanting that stability and independency on prior

prior time suitable to our idea of a necessary Being. Wherefore they supposed eternity a standing point with God, or a perpetual Now, so that all past and future ages are as actually present before him as this instant moment is with us. And we hear divines still talking in the same strain of an eternity before all time, or when time was not, or when time shall be no more, and asserting positively that the past is not gone, nor the future yet to come with respect to God. Perhaps they pronounce too confidently upon a matter whereto the human faculties cannot reach, for if we pursue our abstractions to the utmost, either upon time or space, I fear we shall find them both unmanageable subjects, concerning which we can determine nothing with certainty. Nevertheless, they would not want foundation for what they say, if they would deliver themselves a little more reservedly, and give it only as the more probable opinion, that the efflux and succession of time is owing to the power and Will of God, and therefore may take place only among his creatures.

3. We have already remarked there is no visible repugnancy against supposing the course of time might have been accelerated or retarded: I do not mean that twenty years might have passed in ten or taken up forty to run them out, for this were a contradiction,

but

but that the whole order of them might have been removed higher or lower, so that the Augustan age, or that of our remote descendants, might have been the present. In which case the efflux of time would require some cause to fix it where it is: and therefore must depend upon the Will of God to determine that no more or no less of it should be expired. Nor are there no grounds to suspect that even with ourselves the present moment may contain an interval of time though extremely short, for else how should we get the idea of time at all? Mr. Locke says we get it by observing a succession of ideas, and this way I can readily allow that we come by the measures of minutes, hours, days, and years, which we use in computation: but succession implies a previous idea of first and last before it can be attained, for a variety of ideas affords us no notion of succession unless we perceive one come before the other; nor can it be imagined that their degrees of vividness or faintness will do the business, for let a man stand with a candle in his hand between two looking glasses, he will see a number of flames in the glass before him each fainter than the others, yet the whole scene will appear quiescent nor exhibit any idea of succession. And the ideas of things in our remembrance, though fainter as more remote,

remote, would do the like unless we had another idea of precedence annexed to them. So then our idea of precedence seems to be an original, not derived from any other, but gotten by our manner of existence extending to a length of time wherein there is a first and a last.

4. And I may offer to the consideration of the curious whether this does not stand confirmed by the evidence of our senses in their discernment of motion, of which they have an immediate sensation in some velocities but not in others. For you may see the motion of a stone thrown across you very plainly, but you cannot see that in the short hand of your watch. If indeed you look at it again an hour after, you will see that it has moved, because finding it in a different place from where it was before: but this is a logical inference gathered from the joint testimony of your present sense and your memory of the figure to which it pointed the first time: whereas your knowledge of the stone moving came by direct sensation without aid of the memory or reflexive faculty. Now to see a body move I apprehend we must have an actual perception of it at once in two distinguishable places though it cannot actually be in those two places at once, from whence it seems to follow that our acts of immediate perception

perception have a certain duration containing a beginning and end both present to us together, and whatever moves so slow as that the spaces it passes over within that duration are not distinguishable by our senses appears to us quiescent. If any one shall think the discernment of motion effected by that continuance of play in our sensitive organs after the impulse of objects ceasing, mentioned in the chapter on reflection, he will not find it warranted by experience: for a stone may be thrown very swiftly yet without drawing any trail behind, though you observe it ever so carefully, and a live coal whirled very smoothly round upon a wheel will present no idea of movement at all, but appear a quiescent fiery ring. The distinction of places to our sense depends, not upon the real distance between them, but upon their apparently subtending an angle at our eye, which the same extent of latitude may do when near us that cannot do it when removed farther off. Therefore the moon seems to stand still when we look upon her, because the change of place she makes during a single perception does not suffice to subtend an angle: whereas did she hang so low as almost to touch our atmosphere we should see her whisk over us with an amazing rapidity. Hence if any curious person can ascertain precisely what

what is the least discernible angle and slowest visible motion, he may compute how many of our moments or present times there are in a minute: for by contriving to make a body move equably with that slowest pace in a circle whose centre lies at the eye, and casting up how many of those least discernible angles compose an entire circle, he may reckon just so many moments in the time of one circumvolution made by the body. But if we have a measurable Now of our own, the whole of which is present to us together, we may augment it in the same manner we did the sphere of our presence, until it stretch to the utmost length we can contain in our imagination, and that will make the fullest idea we can form of eternity.

5. Many persons perhaps will not readily enter into what has been here said concerning the standing point or perpetual Now, and truly if they do not find it occur easily to their comprehension they may even pass it over, as being scarce worth the while to take much trouble in studying it. For we do not find the conception of a continual perishing and renewal of time by an uninterrupted succession of moments debases our idea of God; and it would be difficult to make a common man feel the force of the schoolmen's objection or see any hurt in

suppos-

supposing him to exist in that manner, so long as we apprehend the succession to have had no beginning and to meet with no stop. We have indeed a certain period set to our lives, and therefore the lapse of every moment takes away something from the stock of futurity we had in store: but eternity is an inexhaustible fund, therefore time may go on continually perishing without being ever totally destroyed, so that though we should imagine God existing by moments, he will never want moments to exist in. And as he has been pleased to give our spirits an individuality which all the powers of nature cannot dissolve, the efflux of time is no loss to them, who have the same inexhaustible fund for a perpetual supply. Wherefore there is no occasion to alter the common conceptions of mankind upon this matter, or perplex them with objections requiring an answer that few can understand.

CHAP. XIV.

OMNIPOTENCE.

THE very train of reasoning, leading us to acknowledge a God, evinces his omnipotence, or rather, if I may so speak, finds omnipotence in the way towards his existence: for we infer a God because we want a cause from whence all the effects and powers we have any knowledge of must originally proceed. Whatever is done or possible to be done must be done by some agent, and the aggregate of all powers and possibilities make up omnipotence, which we can place in no other subject than God, whom therefore we justly style Almighty. It is true we find power divided among the substances falling under our notice, one wanting what another has: but then the powers of all must derive from some one cause, whom we cannot suppose to want the powers he has given to other things, besides another power not found in any of them, that of creating and allotting primary properties and original stations. Mr. Locke tells us, that active powers alone properly deserve the name, and I think we need make no difficulty of ascribing

ing all those we find in substances to God: for we cannot well doubt that he might if he pleased resist and impel, that is, stop or confer motion like body, or excite perceptions and judgments like our organs; and that he does admit, like space, appears manifest from the substances we see, each whereof must co-exist in the same place with that which is omnipresent throughout all immensity: nor can we any more doubt of his possessing in an eminent degree all the active powers discoverable in spirits. And for passive powers, such as mobility, inertness, and perceptivity, particularly that of pain or uneasiness, though we must not attribute them to him, yet are they all effects of an active power exerted at their creation. We see the course of nature proceed by second causes having their several portions of power allotted in small parcels among them, and these allotments requiring so many operations of active power in conferring them, bespeak an omnipotence in the First Cause.

2. Thus the contemplation of the works of nature and all the powers we can discover operating therein, gives us our first notion of omnipotence: but the mind of man does not rest here, for there requires something further than actual operation to compleat the idea of power. We find many instances in

ourselves wherein we might have acted otherwise than we have done, and conceive ourselves able to take another course in our future measures than that we shall pursue: nor can we avoid thinking the same of God, for if we were to confine his power to the works he has actually performed, we should destroy that choice which distinguishes him from blind necessity, unthinking chance, or whatever else has been assigned for a first cause: neither can a power pinned down to one particular way of acting, be properly called a power. This extends our idea of power to possibilities as well as real events, and what has never happened nor will ever happen, is esteemed its object equally with what has already or will hereafter come to pass. And now we conceive omnipotence a power to do any thing without those impediments and restrictions which obstruct us and all created substances in our operations.

3. Yet still there arises another idea perplexing our imagination with the suggestion of absolute impossibilities, which appear such even to omnipotence itself, and therefore seem to restrain and limit it within a certain compass: such as making a body exist in several places, causing two and two to make five, annihilating time and space, undoing past events or producing contrary ones. But all these things

things imply contradictions, and contradictions are generally held to be no objects of power, as their possibility would infer a defect rather than enlargement of power: for if upon a power being exerted to produce a particular event, another might likewise ensue, it would show a deficiency in the agent as being unable to prevent another issue from taking effect besides that he intended. But after all I do not know why we should pronounce any thing absolutely impossible, but rather conclude that what appears so has been rendered impossible by those laws which God has established immutably: and to suppose him acting contrary to them is supposing him to do otherwise than he has determined to do, which I am sure is no instance of power. He has made body local, and to exist in several places it must be a different thing from what he intended it: he has fixed certain relations between numbers, and to alter those relations would be introducing a confusion he has not thought proper to throw upon us: he has annexed the ideas of time and place to all our ideas of substances, and to separate them would be giving rise to other conceptions than he has thought fitting for us: he has made the past unalterable, and determined that no operation shall have any more than one issue, and to suppose otherwise would be supposing him to have done what

he has not done. Therefore, wherever there appears a palpable impossibility we may depend upon the thing never happening, without ascribing the impossibility to any other than the appointment of God, who has established the properties of substances and issues of events so firmly that we cannot conceive them altered.

4. But there is another limitation of omnipotence invented by our moderns in what they call the nature of things: for they say God could not make man impeccant, could not prevent moral and physical evil, the latter being a necessary consequence of the former, and that he must have a gradation of beings in all stages from nothing up to his own perfections. For my part, I can understand nothing else by the nature of things beside the properties of substances, the situations given them and motions impressed upon them, together with the mutual operations resulting therefrom: and these being given to the substances at or after their existence, could not control the acts of the Almighty whereto they were posterior. It is the nature of plants to vegetate, therefore before there were any plants or growing bodies there could be no such thing as vegetation: it is the nature of fire to burn, but before there was any fire there could be no such thing as burning. In like

like manner physical evil began with the capacity of sentient Beings to suffer by it, and moral evil depends upon this together with the constitution of man occasioning perpetual struggles between reason and appetite: for if he were not liable to suffering he could not take his measures amiss, and if he were void of reason, he would not do wrong in following appetite having nothing else to follow. That there is a scale of Beings I know, but that it reaches within one step of Divinity, I neither know nor believe: nor if it did could I ascribe it to any thing prior to the good pleasure of their Creator: for I can see no necessity hindering that all Beings might have been made of the same species. Therefore the capacity of man, his sensitive-rational constitution, the various orders of Beings, the properties, stations, and motions of substances, could not prescribe rules to the Almighty, from whose power and appointment they proceeded.

5. If it be alledged that we may conceive a nature of things abstracted from the things themselves, let us remember that our abstractions are all taken from our observation of substances, and their mutually affecting one another, and that the abstract is made by an arbitrary separation in our thoughts of what nature has exhibited in the concrete. It is said the rules of natural justice are unalterable,

able, and so they may, because resulting from the nature of man, which does not change with time and place: for he is made a sociable creature, capable of assisting, or hurting his fellows, invested with reason and appetite. The brutes wanting reason have no justice belonging to them: nor would there be any rule of it in man had he no temptation to do wrong; or were he shut up alone like a maggot in a nutshell there would be no place for justice. I see no contradiction in imagining that God might have placed all his sentient creatures apart by themselves without any knowledge or perception of one another, in which case there would have been no such thing as justice in nature: therefore when he gave man his faculties, and placed him in a situation to have intercourse with his fellow-creatures, then he made justice, and then the nature of it began.

6. It is said that God cannot act arbitrarily, and therefore must have some rule or nature f things to guide him. If by Cannot, you mean that he never does, I have no objection; but let us consider what we understand by arbitrary action in men, which is when they act upon whim, or humour, or passion, all which must certainly be denied of him. But why must an action be arbitrary unless confined by some restriction from taking another

ther turn? we find many instances of the contrary in ourselves. It is true if I promise to meet a company upon any occasion, whether of business or pleasure, though the appointment was voluntary at first, I am now under an obligation to keep it, so my liberty to do otherwise is gone: but this is not always my case, I sometimes lay out a plan of several places I will go to, or several things I will do wherein no other mortal has any concern, and having a little steadiness in my temper I pursue it accordingly, without any restriction upon my liberty to depart from it at any time; and since I look upon this steadiness rather as an advantage to my character than otherwise, I am willing to ascribe it in the highest degree to the Almighty, the tenor of whose conduct I conceived fixed, not by law or rule, but by voluntary determination. Wherefore there is no occasion for attributing what we find unalterable to an antecedent nature of things limiting and prescribing laws to God, because we may ground it as well upon his immutability. This seems an idea more worthy of him, and more consistent with our notion of omnipotence; and we may draw as many good uses from the opinion, that he will not as that he cannot order the course of nature otherwise than he has done. Provided we take along with us this

this caution, to be very careful in our judgment of what things are unalterable: a point wherein those, who talk most loudly of a nature of things, have been sometimes grossly mistaken.

7. Many divines, particularly Bishop Beveridge and Dean Sherlock, endeavour to heighten our idea of omnipotence by asserting, that God is not only the Creator, but likewise the continual support of all substances, who would lose their Being the moment he should withdraw his operation upon them. The bishop, after his usual manner, speaks positively as if he knew the thing by ocular demonstration, and uses the comparison of a book, holden in one's hands, to explain his meaning. For, says he, if I take away my hands the book will fall to the ground without any act of mine to throw it down: so I myself should instantly drop into nothing, were God to withdraw his sustaining power from under me, without his needing to do any thing for thrusting me out of Being. Whether the case be so with us I shall not pretend to determine so positively as his Lordship, it being a matter beyond the reach of my understanding to penetrate; but I may say we have no direct evidence of the affirmative, there being rather an appearance of the contrary in the abiding quality of bodies,

bodies, which after all the divisions and separations that can be made by fermentation, putrefaction, dissolution, and burning, we still know are not lost out of nature. Nor does it much heighten our idea of omnipotence to imagine powers not derived therefrom, for substances, it seems, have an inherent power of annihilating themselves if omnipotence were not constantly at work to counteract them. There are inconveniencies attending this hypothesis, which the Dean labours for many pages to remove: and though it may help to give us a full persuasion of our intimate dependence upon the Deity, the same might as well be attained by contemplation of his omnipresence. Nor would it a little weaken our assurance of our own immortality, built upon the individuality of spirit, to suppose individuals too perishable unless sustained by the immediate hand of God; for though he may still continue to support us, we can never be so sure of his future acts as of those he has already done, for the latter are our proofs of the former, therefore his having given us a durable nature is the strongest evidence we can have from the light of reason that it is his Will we should continue for ever. And it is most agreeable to our ideas to conceive a permanency of existence in substances which nothing less than omnipotence can destroy: the

the powers of nature may form compounds, throw them into different combinations, increase, diminish, alter, or entirely dissipate them again; but cannot take existence from any single particle either of material or spiritual substance: this has been always esteemed a privilege reserved to omnipotence alone, and that it requires an exertion of the same power to annihilate as to create. Nor will our thinking in this manner lessen our apprehension of the divine sovereignty; for nobody doubts that he who made us may destroy us again with a word, nor that we receive the materials for our well being, without which Being were nothing worth, by his appointment, and in this sense he may truly be called our continual support.

8. God is incomprehensible in all his attributes, and if we go to fathom the depths of omnipotence we shall lose ourselves in darkness and perplexities: therefore, letting alone all the subtilties of absolute impossibilities, of an independent nature of things, and of the sustentation of existence in substances, let us fix our view upon a prospect we can clearly discern. Let us conceive of God as performing by second causes all the mighty works we see performed, and able to do whatever we can comprehend possible to be done. Let us consider him giving exist-

ence to substances, solidity to matter, perceptivity to spirit, and understanding to man: limiting the ocean, spreading out the earth as a garment, and stretching forth the vast expanse of heaven: rolling the planets in their orbits, fixing the golden sun, and appointing the stars their stations: causing gravitation between large bodies, cohesion between small, elasticity in air and ether: giving motion to the wheels of fortune, stability to the laws of nature, and directing both their certain courses: forming the fibres of plants to fit them for vegetation, the vessels of animals to carry on circulation, and the mental organs to serve as instruments for the understanding: making the earth yield her increase for our sustenance, feeding the cattle upon a thousand hills for our uses, supplying us with air to breathe, water to drink, cloaths to put on, and innumerable objects all around to employ and entertain us: commanding the issues of life and death, and having the future condition of spirits at his disposal. The contemplation of these, and a multitude of other things, that a little thought might easily suggest, will, I apprehend, give us the fullest idea of omnipotence that we are capable of, and make us sensible the Lord is our continual support, and that in him we live, and move, and have our being.

CHAP.

CHAP. XV.

OMNISCIENCE.

WE have remarked before, that intelligence is not the same thing in God as in ourselves, for our intelligence would not suit a First Cause: we cannot work without motives and ideas suggested by objects previously affecting us, so that there must be something already existing from whence we may receive the information necessary to conduct us in our proceedings. Besides, intelligence is a particular mode of perception wherein the mind is always passive, taking such judgments as are impressed upon it: for judgment properly is the act of the objects under contemplation, and not of the percipient, otherwise than by his bringing such of them into his thoughts from whence some judgment may result. We may fancy but not understand peaches growing upon an oak, rivers running upwards: nor in general can we understand any thing different from what it appears after the most thorough examination. Therefore how imperfect notion soever we have of pure agency, such as is generally ascribed to God, we may see clearly

that

that perception as in us being passive is incompatible with it: for we cannot imagine him passive to receive impressions from the impulse of objects, nor yet can we deny him understanding before there was any thing external to be understood, much less refuse him knowledge of the things he has created.

2. The vulgar have an advantage over the studious in some respects, for they discern not the difficulties which perplex the others: they make no boggle at creation, believing they see instances of it in striking fire, which they take to be something new, not existing before, but produced by the collision of flint and steel, for they think nothing of particles detached from the colliding bodies, nor of a subtile matter emitted from within their pores, nor of a circumambient ether, agitated by their vibrations, which being put into a certain violent motion appear in the form of fire. So likewise they seem to have experience of pure agency in their own meditations and voluntary reflections, wherein they imagine themselves acting within themselves, without instrument or material, without other object than their own acts. But our experience, that when our organs are indisposed we cannot think at all, may convince us that we have instruments to employ, and materials to work upon in our mental operations: and

upon

upon a closer attention we shall find that even in the most abstracted thought, there must be something to be perceived numerically distinct from that which perceives. And in general the further we pry into the secrets of nature, we shall find her abounding in mysteries that do not occur to common apprehension. Since then it is the view of nature that must give us any conception of the Author of Nature, the more difficulties arise in the phenomena the less able shall we be to comprehend those attributes by which they are to be accounted for: so that it is no wonder Simonides asked still longer time the further he pushed his enquiries upon this subject.

3. Our inability to conceive knowledge without prior means of information, together with the absurdity of refusing God that knowledge he has given to ourselves, obliges us to ascribe him intelligence, and at the same time to acknowledge this attribute ineffable, being something of a higher nature, but comprehending under it all that belongs to understanding as in the mind, abstracted from the idea of any conveyance bringing it thither. Since then it would be in vain to go about to describe the manner of his knowing, which in the nature of it must be different from ours, and yet we can form no idea of any other

other knowing than that we experience ourselves, we are excusable because necessitated to think and speak of him in a language suitable to what we have experience of. Thus we say he sees all things, looks backward upon the past, and forward into the future, discerns all possibilities, together with the consequences of his own immediate acts, or those of second causes, to the remotest chain of events, and knows whatever is the object of knowledge. The highest term we have to employ is Intuition, the same as Beholding, a term taken from our sense of vision, and serving only to exclude the slow process of reason, whereby we advance gradually to the knowledge of what we cannot discern directly by our senses or our judgment.

4. The difficulty of apprehending any voluntary act, even that of creation, to proceed without a prior intelligence, or of intelligence subsisting without objects to be understood, has set men upon contriving objects for the divine intelligence coeval with itself: for the ancients held forms, ideas, and truths, to be eternal, obtaining a place from everlasting in the divine mind, and I suppose these are what our moderns would understand by their unalterable nature of things. If you examine what those forms and ideas were, you will find they

they were not God, nor attributes, nor yet distinct substances, but inexistencies in him: which Inexistency was a very convenient term, implying something that was both a substance and not a substance, and so carrying the advantages of either; as a substance it was capable of eternal duration, and of furnishing objects for understanding to perceive, as not a substance, it avoided the plurality of necessary Beings, of dividing God into parts, and of making substances uncreated. Nevertheless, admitting the reality of inexistencies, it will be hard to comprehend an inherent eternity belonging to them, for truths are propositions concerning substances, or something relative thereto, therefore cannot be older than the subjects whereof they are predicated: that justice is better than iniquity, springs from the powers of men to benefit or endamage one another, and the consequences resulting to them therefrom which renders actions of one sort better than those of the other. We have seen that if there were no creatures capable of doing good or hurt, there would be no such thing as justice in nature, and if there were no such thing, there could be nothing affirmed or denied concerning it. The epithet Eternal given to some truths, implies there are others not so, and the very distinction made between eternal and temporary truths, shows their

their duration to depend upon that of the subjects whereto they are applied. The same may be said of forms, which are only modifications of substances: form as denoting figure could have no place before the existence of matter, nor perhaps before the combination of it, for we know not whether the atoms have any figure or no: and extended to a larger sense including the form of Being in other substances, it depends upon their primary properties, situations, and connections, which cannot be older than themselves. But it may be urged that although all external objects were annihilated yet we might retain an idea of the forms they had exhibited, therefore there is no inconsistency in supposing the like idea to subsist in some mind before they were existent. But let us consider that the ideas we discern are modifications of our organs, which are exterior to the mind that discerns them: and if we distinguish the perception from the idea and suppose the former in some mind without the latter, it must be a pure act and of course posterior in order if not in time to the exertion of some power by the agent: so that perception must be the act and produce of the divine intelligence, instead of the object or fund in store giving scope to it.

5. It is remarkable that those, who will

not let God understand or do any thing without ideas, are the very persons who stickle most strenuously for a liberty of indifferency in man: so that they will not allow the supreme Being to enjoy a privilege they assume to themselves. Which by the way shows the inconsistency of this supposed privilege with our notions of freedom, since we cannot conceive the most powerful and uncontrolable of all agents to act indifferently without making him liable to humour and arbitrary proceeding: from whence we may justly infer that what they take for proofs of indifferency are rather instances of weakness and imperfection in man. Perhaps I shall be asked whether I can conceive God to act in creating without a view to some purpose, or without a plan containing that order of succession he was about to establish; and I shall readily acknowledge that I cannot. But when I consider why I cannot, namely, because of the narrowness of my conception which is confined within the compass of my experience, and because I can comprehend no other manner of knowing than that I have experienced myself, my not conceiving amounts to no more than a negative proof which in a matter of this nature is no proof, at all. For though want of conception be a

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proper evidence in things familiar to our observation, whose properties and operations we are well acquainted with, as that a stone cannot mount upwards without an external impulse, that water alone cannot compose a vegetable, that solid bodies cannot penetrate one another, and the like; yet in subjects whereof we have no direct experience but only such partial knowledge as may be gathered from their effects, we can expect to comprehend nothing further of them than their ability to produce those effects: whence arises the distinction between things above reason and things contrary to reason. Since then we find an understanding, such as ours in kind, though extended to the highest degree, incapable of assigning properties, allotting stations and directing other circumstances attending creation, but are satisfied nevertheless that all these things require an understanding, let us conclude the divine intelligence a subject above our reason, and forbear to pronounce any thing more concerning it than that it is sufficient to work all that admirable contrivance which we discern in the works of nature. Or, if we still think pre-existent ideas necessary, let us ascribe their origin to some attribute yet unknown and unthought of: for we must not imagine that what little we know of God comprises

the whole of his essence, but there are not improbably other attributes of which the mind of man has not so much as entertained a suspicion.

6. The like difficulties, with that concerning prior information being necessary to compleat understanding, may be started concerning remembrance and foresight, the former being in ourselves an inspection of traces in our memory, and the latter an inference from our observation of past events. If the schoolmen's standing point could be made clear to our apprehension, we need ascribe neither remembrance nor foresight to God, as things superfluous; for the past and future, being alike present before him, might be discerned by intuition as well as events now actually occurring. But since it is not easy for us to separate time from succession, and since to common apprehension it does not derogate from our idea of God to suppose him existing by perpetual duration, we may without hurt imagine him to remember as we remember, and to foresee as we forsee events within our own power by knowing our own intention, where we know perfectly what may be done with the instruments and materials we have to employ: taking this conception as the best we can form and not absolutely pronouncing it adequate to the subject.

7. And

7. And indeed the fullest conception we can obtain of the attributes, arises from contemplation of their effects, for if we go to penetrate into nice abstractions, we shall find them oftener obscuring than enlightening the mind, oftener contracting than enlarging the prospect. Therefore, as we did before upon the article of omnipotence, let us now take a short survey of nature, to find the clearest footsteps of omniscience. Let us consider the Creator determining the precise number of substances, allotting them their properties and capacities necessary to compleat the grand design he had in view: forming a plan to make a world, which was to last for ages with infinite varieties and successive changes, out of homogeneous matter, where every particle must have its appointed station, every motion its determinate velocity and direction: calculating exactly at one glance all the combinations they will run into, the species of compounds they will produce, together with the secondary qualities, operations, and mutual affections, resulting therefrom. How stupendous must be that wisdom which directed infinite power, and by which every thing was established in number, weight, and measure! He knew the exact quantity requisite of that invisible force whereon fermentation, heat, explosion, repulsion, and the four attractions

attractions depend, which had it been greater or less might have produced nothing but disorder in nature. He proportioned the elements that none of them might predominate or fall deficient, and contrived springs for mingling them together, that they might concur in forming the productions he designed. He appointed the degree of influence in the sun and moon, the inequalities of the earth, the rise of exhalations, the variety of soils, and other causes which bring on the change of seasons, vicissitudes of weather, and various dispositions of the air, causing the earth to yield her encrease in proper measure, neither redundant nor wanting. He contrived the curious structure of vegetables, the more admirable organization of animals, where every vessel, gland, and fibre, every part, performs its several office for the growth and preservation of the whole. He adapted the contexture of his plants to the wants of his living creatures, so that each species has its proper food, its nests, and places of harbour, and finds uses in that which is unserviceable to others. He ranged his elements in such order, as to carry on the course of nature without perpetually needing his own interposition: so that they produce minerals and fossils below, vapours, clouds, dews, and rain above, insinuate themselves into the seed to make

make it germinate, and into the plant to make it bear fruits and seeds again, into the fœtus to bring it to maturity, and into the perfect animal, causing it to fructify and renew the species. He gave various instincts to brutes and appetites to man, urging both to effect purposes they do not think of themselves. He allotted their several provinces to the causes of destruction, as well as those of formation and preservation: he maketh the storms, his ministers directing them what to overthrow and what to spare: he commandeth the earthquakes how far to lay waste and where to stop; the lightning whom to strike and whom to pass over. Blight, famine, and pestilence, have their limits in what quarters and what extent to spread their havock, chance and casualty their directions when and where to fall: and all this by the intervention of second causes, which are so wonderfully contrived and exactly adjusted as never to disturb that order of succession he has established.

8. Nor is his wisdom less conspicuous in the moral than the natural world: he has put much into the power of free agents, and left many things to their choice and management, yet he directs their choice by such unseen springs, as lead them to execute his purposes when they least intended it. He has

has distributed various constitutions, talents, endowments, passions, and desires, among men, so that some are fitted as well in ability as inclination for every office wanted in society, and all the conveniences of life depending on human industry supplied. Commerce, agriculture, and the mechanic arts, want not hands to carry them on, nor policy, learning, and science, able heads to improve them: the jarring interests and opposite views of private persons serve to balance one another, and are made to produce order by their proper commixture out of that which separately would tend to confusion. He knows how and when to raise up peculiar characters that may found empires and overthrow them, or erect new kingdoms upon the ruins of old ones. Nor does he only provide for the establishment, the security, and general welfare of nations, but so directs the behaviour of men to one another and the dispensations of fortune, that each individual shall receive the precise portion of good and evil intended him. Nor are his cares confined to this sublunary stage, for we have seen that the spirits of men are of a nature to endure after their dissolution from the body, and we cannot suppose their primary properties given them for nothing, but that they shall receive perceptions by other channels than those which convey

vey them now: so that there must be a different set of laws for the several forms of Being we are to undergo, and, as we may reasonably presume, a connection of interests between the visible world and the invisible: to adjust which, requires a more stupendous wisdom than any thing falling under our notice can exhibit, though that is enough to excite our wonder and exceed our comprehension.

9. And this consideration may help to remove some objections that have been raised upon the seeming errors of nature, as that she wastes her strength in unprofitable efforts and sometimes thwarts the purposes we suppose her to have intended. Lucretius urges that the world could not have been made in wisdom being so full of defects: ravenous beasts, poisonous herbs, and pestilential vapours abound, the rain falls upon the sea where it can do no good, the sun shines upon barren rocks, where it can produce nothing, and man is liable to continual disappointments and disasters. But nature is not thought to work in vain when she contrives a curious structure in the grains of corn fitting them for vegetation, although that purpose be defeated by the corn being made into bread for the nourishment of man: but rain falling into the sea where man receives

no

no benefit by it is exclaimed against as a want of contrivance, because we judge of prudent and vain solely by what relates to ourselves; as if nature had nothing else to do besides tending our services, and whatever was of no use to us were absolutely useless. Besides that we may be mistaken in our premisses, for what is not of immediate use may be remotely so; perhaps the fresh water mingled with the sea may prevent its sending up exhalations that might be hurtful to us, and the sun darting heat upon rocks communicate a warmth to the ground below or air above, which does a good we know not of, or at least we may allow it to influence the weather and thereby affect the growth of fruits and corn. But supposing these things were of no service to us they may do service to the fish, the insects, or other creatures, who deserve some share in the cares of nature together with ourselves. As to the disasters and disappointments befalling mankind, we many times find reason afterwards to rejoice at their having happened, and many more times there may be reason though we do not discern it: but if there be any from which we receive no real benefit, and that the condition of life were better upon the whole without them, yet they may be some way serviceable to other Beings or to ourselves in another

another state of being. Nor is it an exception against our argument that we proceed upon what may be without showing what is the case, for the burden of producing evidence lies upon the objector: there are innumerable marks of wisdom in many works of nature, therefore a possibility of there being the like in those where we cannot trace it is a sufficient defence, and whoever would arraign this wisdom ought to show that the latter cannot terminate in any good effect. For our not discerning the expedience in some performances of an agent, does not overthrow the opinion we had entertained of him from others, nor has it that effect upon us in the common occurrences of life: if a man of whose skill in language and knowledge we had experience were to deliver himself darkly and mysteriously upon some occasions, we should not presently conclude he had no meaning in what he said. If we went into the workshop of an artificer where we found many things admirably contrived and put together, besides others whereof we could not possibly guess the uses, we should not infer from the latter that he proceeded foolishly and unthinkingly in all we saw before us. In both cases we should attribute the seeming uselessness of any thing we saw or heard to our own want of discernment: and much more ought

ought we to do so with respect to the operations of nature, whose tendencies and mutual dependence we have so insufficient faculties and so little opportunities to investigate.

10. When we reflect what a wilderness of thought must be requisite to govern innumerable worlds and order all the particulars belonging to them, we shall find it inconceivable that so much can be contained together in one understanding: therefore some have made it an objection that such a boundless variety must perplex and burden even the divine intelligence. But let us consider why a multitude of thoughts are perplexing and burdensome to ourselves: we perceive by organs and can have no more perceptions than they from time to time excite in us, but the sphere of our presence being too narrow to admit many of them to work upon us together, we are forced to labour and toil in bringing such of them into play as we want, and generally others intrude with them which disturb their operation and perplex our ideas. But how much difficulty soever we may have found in connecting a chain of reasoning or forming a train of thinking, when once become familiar to us by frequent contemplation, we find no difficulty in running it over afterwards and comprehending so much of it as we can contain in one view: for whatever

whatever occurs readily to our thought we discern easily and distinctly, nor find any trouble or perplexity in perceiving, where the prospect lies full and clear before us. If then we will needs imagine God to understand as we understand, by the perception of objects, let us remember that the sphere of his presence extends throughout all immensity, that he wants not the ministry of organs to bring objects before him, none being ever absent from him or removed out of his reach. And perceptions take up no room in the thought nor interfere with one another, but it is the want of them that causes perplexity.

11. There are some truths, as was remarked at the end of our chapter on Judgment, reputed self-evident because they strike the mind irresistibly, yet we cannot trace their origin nor deduce the train of reasoning whereby we arrived at them: among this class may be reckoned the Divine Happiness, which we do not discover from the works of nature as we do the other attributes. The mighty fabric of the world manifests an omnipotence, and the apt concurrence of causes to answer their several uses and purposes declares an omniscience: but we cannot infer the happiness of the Supreme Being from that of his creatures any more than we can the contrary from their miseries. For satisfaction

tisfaction in ourselves is a perception, it is a state the mind is thrown into by the act of objects striking upon our senses or reflection, wherein we are entirely passive nor can help receiving either pleasure or pain while the proper causes are operating: but we cannot ascribe passivity to God nor imagine his condition to depend from time to time upon the agency of any thing external. Nevertheless, the very sound of a miserable or an insensible Deity is shocking to the ear and repugnant to all our notions, nor was there ever any one who admitted the Being of a God that did not conceive him unspeakably happy. We find happiness the only thing desirable, or that which renders all other things desirable, and constantly employ our efforts to procure it: therefore we might suppose that where there is almighty power and infinite wisdom, all means of happiness would be put in practice: but God uses no means to obtain it, evil cannot approach him nor does he want objects or channels to convey him happiness. He made not space for his own reception, matter for his own uses, nor sentient Beings for his own solace and society, but possessed infinite happiness in himself from everlasting, without receiving increase therein by the works of creation. This is what every man's judgment will agree to, and we find no suspicion arise

arise of the contrary: therefore we may pronounce God ineffably happy, but that happiness in him is not just the same as we feel it in ourselves.

CHAP. XVI.

GOODNESS.

Of all the divine attributes there is none concerns us more nearly, or the just notion whereof is more desirable than this of Goodness; and yet none perhaps wherein we find more difficulty to form a satisfactory idea, not liable to objections and inconsistencies. Infinite power and wisdom avail us nothing of themselves, but are rather objects of amazement and terror than of comfort and confidence: and it were better for us to live under a kind beneficent governor, though a little defective in knowledge and ability, than one unlimited in either, but regardless of our weal or woe: for the former would procure us more good than harm, but what befel us from the latter would be mere chance and accident. The contemplation of omnipotence, omnipresence, and omniscience, without goodness, has

has most of any thing driven men into atheism: for they looked upon such a Being as a universal spectre hovering continually over them, prying into all their affairs, able and skilful to affect them in what manner he pleased; and as we are apt to expect the worst from uncouth appearances, they chose rather to put themselves under the guidance of chance or necessity, therefore used all their wits to persuade mankind that a notion of a God was only a phantom, raised in their imagination by crafty persons who found an interest in affrighting them. Thus we find the idea of goodness inseparable from that of God in the minds of all men, for those who could discern no marks of it in the works of nature, concluded from thence that there was no God, admitting that if there were, he must be good: and all who have acknowledged a God, have ascribed goodness to him as an essential attribute. Even the Magi, when they asserted another co-eternal principle, they did it to assign a cause for some things they thought could not proceed from that unlimited bounty and goodness which they believed residing in God.

2. But the attributes of God must all be infinite, for there is nothing external, nothing prior to limit him in his powers or his operations: here then arises the difficulty, for if the

the goodness of God be infinite, whence comes there any evil in the world? Yet that there are innumerable evils the phenomena of nature sufficiently assure us: storms and tempests, earthquakes and inundations, lay fields and cities desolate with all their produce and inhabitants, blighting winds and pestilential vapours wither up and destroy, ravenous beasts devour, villains assassinate, thieves break through and steal, tyrants oppress, diseases torment, cross accidents vex, old age debilitates, our necessary employments fatigue, our wants interfere, our very pleasures cloy, and man is born to sorrow as the sparks fly upwards. We are necessitated to destroy vermin that would overrun us, to slay our fellow-creatures for our sustenance, to weary them out with toil and labour for our uses, to press one another into wars and sea services for our preservation. Nay, evil is so interwoven into our nature, that the business of mankind would stagnate without it, most of our cares being employed in delivering ourselves from troubles we lie under, or warding off those that threaten. If a man were placed in such a situation as that no pain or mischief, no satiety or uneasiness, no loss or diminution of enjoyment could befal him, he would have no inducement ever to stir a finger: but it is the perishable nature of our satisfactions that

that urges us to a continual exertion of our activity to renew them. Now it has been asked, that if these unfavourable circumstances attending human nature could not be prevented, where was the almighty power of God? if he knew not how to prevent them, where was his wisdom? if he could, and might have prevented them, but would not, where was his goodness? Nor will it suffice to answer that many of the evils before mentioned tend to produce greater good, and it is probable the rest of them do the like: I am so far from denying this probability, that I may offer some reasons by-and-by for confirming it, but admitting that good springs out of every evil, this must be owing to the necessary connection between both in the present constitution of nature, but when we consider that nature is not only directed and governed, but was originally constituted by the hand of God, the difficulty still recurs. For if he wished to have given his creatures unmingled good, but saw no other constitution of nature possible besides that he has established, this seems to limit his power, and we are at a loss to account for such limitation: if there were other constitutions possible, containing no mixture of evil, this perplexes us with respect to his goodness which we cannot conceive

ceive to choose a frame of nature disagreeable to itself.

3. Several solutions have been attempted for this difficulty, none of which reach to the bottom, for they stop all at second causes, without reflecting that the properties and powers of second causes depend upon the First: therefore, as often happens in trying to unravel an entangled thread, while they loosen the knot in one place they draw it tighter in another. Seneca lays the fault upon the materials, which he tells us were disobedient to the artist's hand, for he says there are some sluggish elements not susceptible of active and lively forms: how far this assertion unravels any thing I leave others to find out, but it certainly supposes two first principles, a blind necessity or unsentient nature to furnish materials, and work them up into elements, and a divine artificer whose office was only to form such combinations as they were capable of being placed in: for if he had created his own materials, we may presume he would have given them qualities suitable to the purposes he intended them for. Some ascribe evil to our immersion into matter: I know we receive all our evil *from the action*, or by the intervention *of material causes, but* so we do all our pleasures and *satisfactions too.* This only points out the channel through

which evil is derived to us, but does not go to the fountain head: for why should we pronounce it impossible that a matter might have been created with different properties from the present, fitted for exciting pleasant perceptions, but not painful? or what contradiction is there in spirits having a capacity given them of the former without any of the latter? or who can show the necessity of an immersion into matter at all? Might not spirits have been made capable of affecting one another with perceptions? or might they not, as Berkeley supposes, have received such succession of ideas as was thought proper for them, by the immediate hand of God? Others attribute all the mischief in the world to the abuse of free will: if they mean a free will of indifference, they ought to show there is such a power, for we have found no footsteps of it in our survey of human nature; if they mean a free will choosing upon motives, this acts always according to the state of the imagination representing distant good in fainter or equally vivid colours with present pleasure: and I believe all who admit a spiritual substance, hold that there are societies of spirits in nature, whose imaginations are so rectified that they never choose amiss, and, though they hold their happiness by the tenure of their obedience, are in no danger of forfeiting it.

Nor

Nor how little foundation soever there may be in fact for the doctrine of irresistible grace, can it be shown impossible in theory: for if desire, that is, the prospect of satisfaction be fixed upon the proper point, free will never fails to follow it: and a prospect depends upon the objects lying in view, which in this case are the modifications of our mental organs capable certainly of receiving any changes from the divine operation upon them, whereby our sentiments and actions may be influenced without the least impeachment or control of our liberty. Or if reason and free will must unavoidably draw some mischiefs after them, who will presume to say that almighty power had not other faculties to bestow not attended with the like inconveniencies? Nor at most can this cause account for all the evil found in the world, for the brute creation though incapable of misconduct have their share of it, and though much of their sufferings springs from the tyranny and capriciousness of man, all does not: for there are pains and hurts, terrors and slaughters, wants and distresses, among the beasts, the fowls, and the insects, in wild forests, where the foot of man never trod, nor the Will of man ever interfered.

4. There are those who alledge the absurdity of creatures being equally perfect with their

their Creator, and that imperfection necessarily implies a liableness to evil: but this consequence I cannot discern; for there is a manifest difference between actual pain and the absence or diminution of pleasure. A child is less perfect than a man; but the uneasinesses befalling a child arise from diseases, ill management, or accidents, not from the imperfection of its organs. A creature with dull capacity, small powers, and few materials of enjoyment, might nevertheless be placed in a situation to exempt it from all want and trouble. The wise man of the philosophers and glorified saint of the Christians, although supposed to stand above the reach of all evil, are still very imperfect in comparison with the Author of their Being: wherefore evil is not so connected with imperfection, but that the one may subsist without the other. Besides, if it were otherwise, one should expect to see them always accompany one another in equal proportion, but the contrary appears manifest from experience: for persons of the brightest parts and most extensive knowledge, are not always the freest from troubles, an intelligent man has no less his share of them than the foolish ostrich or the stupid beetle. Nay, that quick sensibility, which is the groundwork of all advances towards perfection, increases

creases the pungency of pains and vexations. Many talk of a scale of Beings which, they say, must rise in a continued gradation from Nothing to the divine perfections: yet they cannot deny that there is an immense gap between the highest rank of creatures and their Creator, and why might not there have been a gap between Nothing and the bottom of the scale, so as to exclude all those degrees which necessarily contain a mixture of evil, if there be any such, which we have just now seen cause to doubt of? But neither do they show why there must be a scale of Beings, nor what inconveniency would ensue upon the lowest being raised to the condition of the highest. Do they make an attribute of curiosity, and imagine the Supreme Being like some great nobleman, who will have animals of all kinds in his menagerie to divert himself with looking upon them? Or did it cost omnipotence more trouble to make an angel than an oyster, so that being fatigued with working up the former, the latter was undertaken by way of play and recreation? Or does one take up more room in nature than the other, and after the universe was filled with Beings of the superior order, there remained space only for the inferior classes in the interstices between them? In short, it seems laying a restriction upon Almighty

mighty power to imagine that things could not have been constituted otherwise than they are, and to conclude that because we see a scale of Beings, free will liable to abuses, pains and troubles brought upon us by the action of matter, therefore God was under a necessity of ordering the world after this manner.

5. Sometimes we meet with persons who in handling this subject endeavour to stop our mouths with rhetoric instead of convincing us with logic, for they tell us that starting these difficulties concerning goodness is murmuring against Heaven. Hath not the potter power over his clay to make one vessel to honour and another to dishonour? This comparison was very proper for the purpose it was intended to answer, namely, to silence the unreasonable clamours of such as fancied themselves injured by the dispensations of Providence; but by no means helps us forward in a sober inquiry into the nature and extent of the attribute under consideration. For the question is not what the clay has a right to expect, but what we conceive it likely that a beneficent potter would do, if he knew his vessels capable of enjoyment or suffering according to the mould wherein they were cast. The measure of bounty is not the rights but the wants and capacities of the subject whereon it is exercised; nor does bounty begin until

until justice ends, for there is none in giving every one barely what is his due. Were there a man who should provide necessaries and conveniencies for his children, lead them into all useful accomplishments, indulge them with variety of pleasures and amusements, they ought to think themselves happy under such a parent notwithstanding he might have some humours which were troublesome to them now and then; yet another who were clear of this exception were better. So we, when we weigh the blessings against the troubles of life and find how greatly the former exceed the latter, have abundant reason to be satisfied with our lot: yet when we reflect on the character of our heavenly father in whom there can be nothing of humour, or illwill, or grudging, the preponderancy of good does not account for the few evils scattered up and down among men, because though we can still acknowledge him good, we are apt to imagine that if these were removed he would be better. So that our want of title to better fortune than is allotted us does not help to reconcile the phenomena of nature with our notion of infinite goodness: for the difficulty springs from our idea of the Donor, not from our own merits, nor from any exception to the value of his gifts.

6. Thus all that has been suggested to account

count for the origin of evil has proved unsatisfactory, and it still remains an inscrutable mystery which has perplexed the thoughts of men from the days of Job down to the present times, and probably will continue to do so as long as there shall be men on earth to descant upon it. Though we have not an adequate idea of infinite power so as to determine in all cases what is absolutely impossible, or implies a contradiction, yet we may clearly see that whatever has been done might have been omitted, and that the capacity of suffering is a property given to creatures with their being: nor can we imagine a necessity constraining God to form a world in a manner not suitable to his intention, or attended with inconveniencies he would wish to have removed, without derogating from his almighty power and without admitting two First Causes interfering with one another. Therefore we must needs acknowledge that God created evil as well as good, and that nothing of either happens to his creatures unless by his appointment or permission: and if this seems to derogate from his goodness, let us consider whether we have an adequate idea of goodness, or know precisely what is belonging and what repugnant to it.

7. Goodness in ourselves is the prospect of satisfaction annexed to the welfare of others,

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so that we please them for the pleasure we receive ourselves in so doing, or to avoid the uneasiness we should feel on omitting it. But God is completely happy in himself, nor can his happiness receive increase or diminution from any thing befalling his creatures: wherefore his goodness is pure disinterested bounty without any return of joy or satisfaction to himself. Therefore it is no wonder we have imperfect notions of a quality whereof we have no experience in our own nature: for we know of no other love than inclination, which prompts us to gratify it in the same manner as our other inclinations. In the next place let us examine our idea of infinite goodness taken in the abstract before we inquire whether God be good or no, and we shall find it incompatible with that of infinite power: for infinite goodness, according to our apprehension, requires that it should exhaust omnipotence, that it should give capacities of enjoyment and confer blessings until there were no more to be conferred; but our idea of omnipotence requires that it should be inexhaustible, that nothing should limit its operations so that it could do no more than it has done. Therefore it is much easier to conceive an imperfect creature compleatly good than a perfect Being, for if he pursues invariably all opportunities of doing good to the utmost

utmost of his power and knowledge, he deserves that character, and if there are any injuries sustained which he cannot redress, any distress unrelieved which he knows not of, his weakness and ignorance are a full excuse for his omission. But where there is almighty power, unlimited knowledge, and perfect wisdom, we can neither conceive that infinite goodness should extend to the utmost bounds of that which has no bounds, nor yet that it should stop until it can proceed no further. Since then we find our understanding incapable of comprehending infinite goodness joined with infinite power, we need not be surprized at finding our thoughts perplexed concerning them: for no other can be expected in matters above our reach, and we may presume the obscurity rises from something wrong in our ideas, not from any inconsistencies in the subjects themselves. In the last place let us remember that the attributes of God are infinite, therefore if he were not infinitely good he must have been infinitely malicious, for either in him must be pure and orginal independent on further views which might sometimes render one expedient and sometimes the other: but this the most melancholy imagination never yet suspected of him, for there is nobody so destitute of enjoyment, or so overwhelmed with pains and distresses,

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as not to be sensible that almighty power might have made his condition still worse.

8. Having thus taken off the force of those objections urged against Divine Goodness, by showing that such will naturally start up upon matters whereof we cannot have a full comprehension, and that greater will arise upon the contrary supposal, let us now try what clear ideas we can form of it, and what evidence we can gather of its reality from our experience. And we need not go far to seek for proof; the very air we breathe, the food we eat, the relish we find in our enjoyments, the materials ministering them to us, the benefits and mutual solace of society, the faculties of understanding and volition, the value of life which renders it generally desirable, are so many striking marks of a beneficent disposition in the Giver of all these things. Even our troubles come attended with their alleviations: we have remedies and assistance in diseases, comfort in distresses, and hope lies ready as a salve for every sore, nor are there any in so forelorn a condition but may find something to thank God for, if they will look about to seek it; for, he remembers mercy in judgment, and gives us a glimpse of his goodness in the very seasons when he afflicts us. Epicurus, though disposed to find all the faults he could in the system of nature,

yet

yet made it one among his collection of Masterly Maxims, That pain if grievous was short, if long it was light. Nor are the brute creatures disregarded by the author of their Being: he supplies them with food for their sustenance, cloathing of hides, feathers, or shells for their defence, harbouring places for their security, appetites for their preservation and entertainment, instincts for their direction: the beasts and fowls breathe his air, the fish take their pastime in his waters, the reptiles live upon his bounty, and the most contemptible insects receive their portion of enjoyment from his hand.

9. The epithet Contemptible happening to occur in the last line suggests a train of thought that may lead to something serviceable upon the present occasion; for nothing is contemptible in the eyes of God, it is the vanity and selfishness of man that sets him in conceit at an immense distance above other creatures and thereby renders them objects of scorn and contempt: so I run the hazard of offending the delicacy of my cotemporaries by representing almighty power and wisdom employed in providing conveniencies and enjoyments for the pismire, the earth-worm, and the mite, the ugly spider, the filthy maggot, and the venomous adder. Nor might have succeeded with them much better had I extended

tended the observation no further than to the human species; for they concern themselves not with what happens to the Indian, the savage, or the hottentot, they care not for the greasy ploughman or the dirty cinder wench: persons born in a cottage are thought below their notice, all who want their own knowledge and politeness deemed incapable of enjoyment. So that we lose the view of all the good done to objects we esteem unworthy of any regard, and when things happen amiss to ourselves we forget how often they have happened to our wishes. This narrowness of mind contracts our prospect of nature, and as she has some dark spots upon her face, if the eye fixes upon one of these, it sees nothing but gloom and despondency; whereas were our vision a little enlarged we might perceive every dark place surrounded with a splendor of light.

10. It is observable that men commonly take their estimate of nature from themselves and their own situation: while success attends them they think they shall never meet with disappointment, and when disappointment stands across their passage they think they shall never see the lucky moment again: while in the vigour of youth, the constitution strong, the spirits alert, desires eager, and materials of gratification continually at hand, they

they find no fault or blemish in nature, the world is then a glorious world, and pleasures expected without end; we hear of no murmurings against Providence, nor mistrusts that things are not so well ordered as they should be, but they are rather apt to think God, as I may say, too good, so as to wink at their miscarriages, indulge them in their follies, and suffer them to do what mischief they please to their fellow-creatures without control. But when pain, disease, disappointment, or distress, pinches them, the tables are turned, they see not nor sympathize with the enjoyments abounding elsewhere, but take their judgment of nature from that little spot wherewith they have immediate concern, and then doubts arise concerning the condition of things: why was not this mischief prevented? where was almighty power that could not, or where was infinite goodness that would not, prevent it? Thus we see that infinite goodness ebbs and flows according to the state of our minds: when we are at ease in ourselves, we find no difficulty in entertaining the idea of it: when dissatisfied with our present condition, nothing is harder for us to comprehend. Nor is this to be wondered at, for vexations of every kind give a melancholy cast to the mind, destroying the relish of those pleasures which used to delight us before, so that

that we have nothing similar in our imagination wherewith to compare the sensations of others: for our only way of estimating other people's enjoyments is by imagining ourselves in their circumstances and reflecting on the joy we should receive thereby, but when the mind is so disposed as to care for nothing and find a relish in nothing, we cannot readily conceive others wishing or caring for what would not affect us; and therefore being unable to form a clear conception of enjoyment either in ourselves or elsewhere, we lose the idea of that goodness which can be apprehended only by its effects.

11. Thus we find our unfavourable suspicions of nature, owing to the wrong turn or disordered condition of our imagination, when our own ill management or unlucky circumstances confine our view to the least favourable of her features: for so a man may take distaste to a fine building, if he be locked up in the necessary, or resolve to look upon nothing else. Therefore it behoves us to take the opportunity for forming our judgment when the mind is most in tranquillity, not ruffled by vexations, nor pressed by importunate desires, when the understanding is clearest, when we can extend our view all around and consider every thing impartially: and we may help ourselves not a little towards en-

larging our mind by contracting a habit of benevolence. I have already taken notice in the chapter upon that article, as one of the advantages accruing from a benevolent temper, that nothing contributes so much to open the heart, to enliven the imagination and give a chearful cast to the scenes around us. For what we wish well to, we think well of, and if we wish well to every thing we shall be attentive to the successes and pleasures that happen to every thing: and by turning our observation constantly that way shall find subjects to rejoice at which the selfish and narrow spirited never know. We shall cease to measure others satisfactions by our own standard, or think nothing desirable to them which we would not choose for ourselves; but shall discern a variety of tastes adapted to the several conditions wherein men are placed, and things which were irksome at first becoming pleasant by custom. We may see that children have their plays, the vulgar their amusements, coarse jokes, and may-games: even folly does not exclude pleasure, nor poverty banish contentment. Their is as much mirth in the kitchen as the parlour, and as great diversion in a country fair or a cricket match as a card assembly or a ridotto. The cobler whistles at his stall, the dairy maid sings while she is milking, the ploughman munches

munches his mouldy crusts with as good relish as the rich man eats his dainties, for he has that best of sauces, hunger, to season his victuals. Labour purifies, the blood, invigorates the limbs, strengthens the digestion, ensures quiet sleep, and renders the body proof against changes and inclemencies of weather, all which are considerable articles in the enjoyment of life, nor can their loss be compensated by any advantages of family, fortune, learning, and politeness. Nor is the lowest herd incapable of that sincerest of pleasures, the consciousness of acting right, for rectitude does not consist in extensiveness of knowledge, but in doing the best according to the lights afforded; and many artisans, servants, and labourers, find as much satisfaction in fulfilling the duties of their station, as the philosopher in his researches into Nature. Nor need we stop at the human species, for the brute creation too exhibits scenes agreeable for the good-natured man to look upon, he may rejoice to see the cattle sporting in the fields, or hear the birds singing or chirping out their joys, to behold the swallow building nests to hatch her young, the ant laying in store of provisions for her future accomodation, the flies in a summer evening dancing together in wanton mazes, the little pucerons in water frisk-

ing nimbly about, as if delighted with their existence.

12. Whoever has a heart to enjoy such contemplations will be apt to pursue them until he has satisfied himself there is a much greater quantity of enjoyment than suffering upon earth: for pleasures spring from steady permanent causes, as the vigour of health, the due returns of appetite, and calls of nature to exercise or rest; but pains proceed from accidents which happen rarely, or diseases which are either slight or temporary. And he will entertain a favorable idea of that bounty which supplies desires and means of gratifying them to every species, from imperial man down to the scarce perceptible insect. When he has filled his imagination with this idea, he may draw comfort from it in his seasons of affliction and distress, for though he finds no pleasures within his own reach, or have lost the relish of any that might be offered him, he may reflect how many thousands at that moment are dancing and singing, marrying and giving in marriage, advancing towards the accomplishment of their wishes, and pursuing all kinds of enjoyment with full gust and satisfaction: how many millions of animals are eating their food, providing for their accomodations, taking their pastimes, or ruminating in their lurking holes; and this consider-

consideration may alleviate his trouble. I do not mean nor expect that he should carry his benevolence to such an unattainable height, as to make the joys he feels in sympathizing with the joys around him stifle the smart of every evil that can befal him: but he may gather this consolation from them, that there is an inexhaustible spring of bounty flowing incessantly upon the world, and from thence conclude that himself shall partake in due measure of the stream at some time or other, if not in his present at least in some future state of Being.

13. For the great preponderancy of good over evil, in this part of the creation lying within our view, manifests a beneficence in the character of the Author, which must operate likewise no less in all other parts of his work: for so we reason in matters familiar to our acquaintance. We know nothing of causes unless by their effects, nor the characters of persons unless by their deeds. We know that fire will burn because we see wood consumed by it, that water is fluid because we see it fluctuate and disperse. If a man has been used to cheat, we expect he will cheat again, or if he has long behaved with honesty and truth, we expect the like behaviour from him for the future. Thus our whole dependence upon the qualities of bo-

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dies we daily handle and persons we daily converse with rests upon our experience: and we have or may have, if we will take pains to acquire it, the like experience of an unwearied bounty pouring blessings all around us: so that we have as good ground of assurance that God will continue to do good as we have that fire will burn, that the stone will resist the touch, or that our bosom friend will not betray us. Were we entertained in the family of some nobleman, if we found him kind and condescending to his dependents, humane to his servants, careful to establish salutary orders for the regulation of his household, watchful to see that even his cattle had their proper food and conveniences, we should naturally conclude the same good management prevailed in all his other houses. We have lived some years in this family of terrestrial animals, and we may as naturallly conclude that the same beneficence which provides so amply for their welfare according to their respective wants and capacities, extends to every other family of sentient Beings throughout the universe.

14. By this means we may attain as full and clear an idea of goodness as may satisfy us of a character of benevolence in the Disposer of all things: but the evil we likewise experience cannot infer a defect of goodness, because

because the attributes must be perfect and infinite; nor yet an opposite character, because our clearest judgment informs us that contradictory characters cannot subsist in the same subject. Therefore we must acknowledge evil to be unaccountable, and unaccountable phenomena we never extend further than we can see of them. It is possible that what portion of evil there is in nature may be confined to the visible world and lie within the regions of matter, nor need we suppose it existent elsewhere until further reasons shall occur for the supposition. At least we may presume from the character of goodness that the quantity of good in the universe vastly exceeds that of evil, which is enough to give us an inviting prospect of our condition wherever we shall go, unless there be some unfavourable circumstances particularly attending ourselves which make us liable to fear the worst.

15. As to the perplexities involving our thoughts let us consider from whence they generally arise, and perhaps we shall find them not irremovable. We commonly esteem goodness to consist in a compliance with our humours, a parent that indulges us in all our desires we look upon as supremely good, and if we should happen to desire what is hurtful, still we should think his denial of it a severity. But desire ordinarily fixes upon present satisfaction,

faction, and seldom runs along the whole line of consequences from whence the real value of things ought to be estimated: so that we often think ourselves hardly dealt with at the very time when we are receiving good. But when the trouble is once over, and we feel the benefits resulting therefrom, we can acknowledge that to be goodness we once esteemed hardship: and so we should have done at first had we had a clear discernment of the distant good and an earnest desire for it; for then we should have thought nothing a hardship that lay in the way to accomplish it; so that our discontents are owing to a misapprehension occasioned by the narrowness of our views.

16. So long as things succeed currently to our wishes we entertain no doubt of divine goodness, while we have the means of gratifying our desires we find fault with none of the laws of nature, not even that of rest after labours of the day, although sleep cuts us off from above a quarter of the enjoyments we might have had could we subsist without it. A moderate pittance of happiness contents us if we have no thoughts of any thing higher, nor is there a man so unreasonable as to quarrel with the Almighty for making him an imperfect creature, or to think it an impeachment of goodness that he has not the capacity and enjoyments of an angel. Since then imperfection

perfection of happiness in any degree is not repugnant to our idea of goodness, let us consider whether this imperfection, although not necessarily implying a liableness to evil, may not well consist with a mixture of it. For the value of existence depends upon the quantity of happiness received therein, and every evil is the same as a subtraction from that quantity: if then the good and evil compared together leave a balance of the former, which if given alone, would be sufficient to denominate the creature happy, and be thought a gift becoming infinite goodness to bestow, why should not both together be thought so too, since they are of equal value? A salary of five hundred pounds a year, chargeable with a constant land tax of four shillings in the pound, is equal to four hundred without that deduction: and if a friend put you in a way of making a thousand pounds by laying out four hundred, you would think yourself as much obliged to him as if he had helped you to a clear six hundred. So if there be a profuse abundance of happiness together with a small mixture of suffering distributed throughout the universe, the condition of the creatures is as valuable as if the net balance of the former had been given alone: but this would have been thought to denominate the giver infinitely good, why then should the

the state of the world, as it is, occasion any doubts to the contrary?

17. Much of our good springs out of evil, for objects exciting pleasant sensations rarely occur, but it is the amusement we find in the exercises of our activity, and the engagement of our pursuits that furnish us with most of the enjoyments of life, and it is the desire of delivering or guarding ourselves from something we do not like, that chiefly prompts us to bestir ourselves: so that if there was no such thing as danger, want, or satiety, we should have little to do, and life would become insipid for want of employment. Nor does our reflection upon the good we possess contribute less than the pleasures we actually feel to that complacence of mind which renders life desirable, but this reflection arises principally from the contemplation of those evils from which we are exempted: it has been constantly observed that we know not the value of blessings until we lose them, and those who meet with nothing to ruffle them are scarce sensible of their happiness. For as a foil sets off a beauty, so the disappointments we have experienced or distresses we behold others labour under, give us a just estimation of our present good fortune. When we turn our thoughts to thanksgiving we generally find them run upon topics relative to some

some wants that are supplied, distresses that are relieved, dangers from which we are secured, or mischiefs from which we are exempted: nor can we scarce bring our minds to thank God for the air we breathe, because it is so common; or for the constant returns of spring and summer, of morning and day-light, because we never miss them; and when we do discern the value of these things it is by reflecting on the forlorn condition we should stand in without them. A rescue from some imminent danger gives a stronger apprehension of kindness than a thousand good offices, and pleasure never comes so welcome as when preceded by pain; nay ease alone after deliverance from trouble affords a joy that satisfies the mind without any of those amusements necessary to content us at another time: most of our vexations make us some returns of this kind, and many of them perhaps greater than the uneasiness they gave us while present. The complicated machinery of our body, consisting of so many tender vessels and fibres liable to a thousand disorders yet preserved many years entire and unhurt, the variety of necessaries requisite for our food, our cloathing, and our accommodation, continually supplied from innumerable quarters, fill us with a higher idea of the divine wisdom, care, and beneficence, than we could otherwise

wise have entertained. Thus want, weakness, imperfection, and evil, tend to display goodness, and without them we should scarce have known what it was: so that whatever joy and solace we receive at any time in contemplating the divine goodness, we owe to that mixture of evil falling within our notice.

18. Having satisfied ourselves by these and many more the like considerations which our experience may suggest, that there is a character of goodness in the Author of nature, let us now examine what we may conceive agreeable or repugnant to such character, this being our only guidance to judge of matters not falling under our immediate observation and experience: and we shall find these two inferences naturally follow from our idea of goodness. That the proportion of good must greatly surpass that of evil in the universe, and That good is given for its own sake, but evil never sent unless as a means productive of some greater good. The former of these conclusions may give us a favourable prospect of nature in general, and the latter may yield us comfort in particular seasons of trouble. For we may consider evil as a tax imposed, not to feed the avarice and ambition of the great, but for the support and exigencies of the government; and though we do not always see the uses for which it is wanted,

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yet we may rest assured of the application being in good hands, and that no more is levied than will be disposed of to the advantage of the community: therefore we may look upon every payment as a purchase of something more valuable than the price that is paid for it, or as a call for money to be improved at interest upon the best security. Whoever can possess his imagination with a lively sense of suffering being a purchase, and this seems not impossible to be effected by a due and habitual reflection upon the nature of goodness, will be so far from being disturbed at the weight or sharpness, or continuance of the miseries he sees among mankind, that he will regard it as an evidence of some unspeakable enjoyment lying in store, which infinite goodness judges worth the purchasing at so high a price. Nor need it stagger him to reflect that suffering is sometimes inflicted for a punishment of wrong doing, for we have seen in the last volume, that a righteous man will never punish unless with a view to some greater advantage accruing therefrom: so that even punishment may be looked upon in the light of a purchase. Neither can this representation of it give an encouragement to do wrong for the sake of purchasing that greater advantage, for besides that persons inclined to catch excuses for doing wrong are not likely to attain

the persuasion above mentioned, the purchase in case of punishment either redounds to the benefit of others, or consists in an exemption from those worse punishments which impunity would draw upon the delinquent.

19. Since then we find the estates of happiness in this sublunary kingdom subject to taxes, we must take the whole together, the rents and profits together with the disbursements. Or since evil is so interwoven with good that one cannot be had without the other, we must not pick out single threads but regard the whole contexture as one piece, and in this light it will appear that every dispensation is good and worthy divine bounty to bestow. As to the existence of evil and its being so interwoven into the fortunes of creatures, we can do no otherwise than refer this to some unknown attribute. For as has been observed before, the little we know of God being drawn from those few of his works lying within our cognizance, we cannot expect they should discover the whole of his nature, but there may probably be other attributes belonging to him of which we can entertain no conception. We have already found the necessity of some such in the article of omniscience: for though wisdom may discern what capacities and stations are requisite for compleating the grand design in view,

view, it cannot determine what particular substances shall have such or such capacities, or occupy such or such stations preferably to any others. So upon the present article we have found it repugnant to our notions to suppose either that infinite bounty could stop until there was nothing further to bestow, or yet that creatures should be raised to the perfection and ineffable happiness of their creator. Therefore we must necessarily conclude there is some other attribute to moderate between goodness and omnipotence, to set the proper limits of imperfection ascertaining how near it may approach towards perfection, and what distance it must always keep therefrom, and to be the origin of evil: with all which we need not perplex our thoughts either to raise doubts or attempt discoveries concerning them, since they spring from a source whereof we can have no comprehension.

CHAP. XVII.

EQUITY.

IF this shall appear a novel title, it is so no otherwise than by making that a separate article which uses to be included under a more general term: Equity being a species of Justice, which has always been ascribed to God in the most perfect degree. For justice is commonly divided into distributive and commutative, and though the latter epithet be not properly applicable to the proceedings of God, with whom we have nothing to commute in return for the blessings received at his hands, yet neither do all our dealings with one another relate to matters of exchange or such wherein our own interests are concerned. In apportioning the cares of a parent among his children, the protection afforded by a prince to his subjects or countenance given to his servants, there are certain rules which a just man will observe, and these belong to that branch of justice usually styled the commutative, nor can we conceive the like rule of equity disregarded by him who is righteous in all his ways.

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2. This attribute seems the easiest of any to our comprehension, for it is no more than a perfect impartiality inclining God to be good alike to all, and to spread his mercy over all his works. It involves us in none of those difficulties we met with before on contemplating omnipotence, omniscience, and infinite goodness, which we cannot well conceive either with or without bounds. For the opportunities of success given to one man, must be possible and may be afforded to another, nor can wisdom want methods of bringing about events similar to those it has already contrived, nor do we see any hindrance that whatever measure of bounty is thought proper for the creatures may be diffused equally among them. And it is agreeable to our notions of God that it should be so, for his bounty is pure, unexcited by objects, but flowing solely from himself, and we naturally expect that the same cause should produce the same effect wherever it operates, unless by reason of a difference in the subjects: but there could be no difference of one man from another in their state of nonentity, what difference lies between them, was of God's making, and if he has been more sparing of his favours to some, we may presume he will make them amends upon another occasion. Nor can we fail of being confirmed in this notion

notion when we reflect what it is that makes men partial or unequal in their good offices: we perform them to those from whom we expect the like return, or in gratitude for services done us, or to gain credit and reputation in the world, or for relation or intimacy sake, or because their humours suit with our own, because we find a pleasure in their company, or have taken a favourable liking to their persons: but the more a man improves in reason and virtue, the more equal we find him in his sentiments and behaviour towards those with whom he has intercourse. Thus we find the seeds of partiality in wants and weaknesses of human nature, none of which can have place in the Divine. I shall not presume to limit the authority of God, or set up a claim to the like proportion of blessings that others enjoy; for we are the work of his hands, and he has not only full power but lawful right to dispose of us as he pleases, to bestow a larger measure of his bounty upon one, and less upon another: but the question here, as before, in the case of goodness, is not what the creature has a right to expect, but how our idea of the dispenser of all good things makes it likely he should deal with us. And for my part, when I consider the nature of pure unmerited love, I can see nothing that should cause it to make a difference in objects where those

those objects have not a prior intrinsic value. Therefore we may abide by our theory and conclude the love of God extended in equal measure, to all who are objects of it, until we shall find our theory corrected by experience.

3. But it may be thought experience does contradict our supposition by the very unequal distribution of good and evil we see prevailing among mankind: some abound in superfluities, while others want even the necessaries of life, some enjoy exuberant health, while others struggle continually with distempers and infirmities, some increase knowledge without measure, while others scarce know their right hand from their left. Fortune, honour, accomplishment, success, and ease, take up their abode with a chosen few, and leave the rest of the world to labour, trouble, and anxiety. But in the first place, let us examine the conditions of men narrowly, and we shall find them not so very unequal as may appear at first sight, for there are many unobserved joys and vexations which we do not take into account; therefore we are very bad estimaters of happiness, for we judge of it by our desires which fasten upon intense pleasures, and run eagerly after those things which would give us the greatest joy in the acquisition, or the most pungent sorrow upon losing

losing them: but it is the continual produce of satisfaction and complacence yielded by possessing, not the first transport on obtaining, that constitutes the real value of things. The poor man wishes for riches, the diseased and weak for health and vigour, the ignorant for knowledge, and such as are possessed of those advantages, would think it a grievous misfortune to lose them: so that it is acknowledged by the concession of all, that they are better had than gone without, nor can it be doubted that the giving of them would cause extraordinary joy in the receivers, and the deprivation of them as great grief and vexation in the losers. But could we lay open the thoughts of those who have been used to either fortune, without having ever known the opposite, and penetrate into their sentiments and feelings, we should find that pleasures grow insipid, and misfortunes light, by custom, that wants increase by success, and content springs out of disappointment, that both have their joys and their vexations, their comforts and their troubles, their amusements and their dislikes, their satisfactions and their uneasinesses, perhaps in nearer proportion than can easily be imagined. At least, it must be admitted that all receive some share in the bounties of heaven, and pay their quota to that tax of evil imposed upon human

man nature. Nor do salubrious or pestilential airs, vernal suns, or the scorching dog star, seas or winds, make any difference between high and low, strong and weak, wise and foolish.

4. In the next place let us remember, that notwithstanding we cannot, with all our allowances, make the lot of all men exactly equal, the spirit will remain entire after dissolution of the body, still capable of receiving good and evil, of satisfaction and uneasiness; and though all the channels conveying either now should be taken away, we know not what new faculties it may acquire, or what materials may be provided for exercising them in the world whereto it is going: so that we can no more pronounce upon a man's lot by that small period of his existence within our inspection than we can upon his enjoyment of life by seeing him pass a single day. For what was wanting here, may be made up in another state, and what was redundant may be retrenched. Wherefore our experience is too imperfect to warrant our altering the theory of this attribute, which is the clearest of any to our conception.

5. A little observation may show us how naturally men's reason may lead them into an opinion of the Divine Equity. Such as do not much exercise their reason, conceive of God

God as having his favourites and his aversions, because they have so themselves, and value themselves upon it, for we form our idea of God upon the model of what we esteem most excellent in ourselves; but those who practise thought and consideration, see that an equitable temper is a commendation in a man's character, and consequently ascribe it in a most eminent degree to that Being which is the fountain of perfection. Therefore the unequal distribution of good and evil upon earth has always been made an argument to prove a future state, that the account might be set even there which was left unsettled here: and opinions have been embraced without other foundation than because they were thought necessary to reconcile the different lots of men with the perfect equity of that power by whom they are disposed. Xavier, the great apostle of the jesuits, taking for granted that the only way to happiness lay through the Roman Church, and yet being sensible that thousands are born and die without ever having an opportunity of being admitted into it, asserts positively that every Tartar and savage has a revelation of the Romish faith made to him in the very article of death. He could have no evidence to support this assertion; for who knows what passes in the departing soul after it has lost the use of speech by which it might declare

declare what it felt to the standers by? but he had recourse to this wild imagination as the only way to salve that equity which he could not but acknowledge must deal alike favourably with all and propose the terms of happiness to every human creature. To this cause likewise we may attribute the invention of a free-will of indifference, that men may make their fortunes unequal where the favours of heaven bestowed on them were equal; as a child for whom the father has made an ample provision with the rest of his brethren may yet run himself into poverty by his own extravagance: but if the Will were constantly determined by motives, it was thought the lot of every one must depend upon what motives were furnished. Since then we have the concurrence of the sober and considerate part of mankind in behalf of this doctrine of God, being equitable and alike good to all his intelligent creatures, and we find men so firmly rooted in this persuasion as to practise all contrivances to bring their particular tenets to coincide with it, we need make no scruple of ranking equity among the attributes and using it as a principle whereon to build what judgment we can concerning the constitution of things unseen.

6. These are all the attributes whereof we have any distinct knowledge or conception, and

and I call them primary as being essential to the Divine Nature. Nor let it be thought an omission that I have taken no notice of Justice, Purity, Majesty, and Holiness, which have always been esteemed attributes equally with those before mentioned: but I look upon these as secondary attributes, not arising from contemplation of the Divine Nature considered in itself, but in conjunction with the nature of man and constitution of things in the universe; upon which I shall want to make some further observations before I can explain my thoughts concerning them. Therefore shall postpone the consideration of these secondary attributes for the present, and hope it will be left to me to choose the proper time for entering upon it according to the course wherein my reasonings shall carry me.

CHAP. XVIII.

TWO CHARACTERS IN GOD.

WE are told that no man can see God and live, by which I do not apprehend it necessary to understand that the sight of him is so terrible

terrible as to destroy us, but that our faculties are incapable of a full discernment of him: so that no man can see God while he lives encumbered with this veil of flesh, nor until invested with a finer organization, or enabled to see intuitively even as also he is seen. And we have found this truth exemplified upon our inquiry into the attributes: we saw clouds and difficulties gather around us, and discovered a necessity of other unknown attributes, whereof the understanding of man has never yet received a glimpse, to furnish objects for infinite wisdom, and set the measure to infinite goodness. On the other hand, we may be said to see God continually before our eyes: our own existence and that of the objects we behold lead us to the knowledge of his Being, the curious structure of our bodies, the wonderful agility and variety of ideas in our minds declare his wisdom, the blessings poured daily around us manifest his goodness, the sun that rules by day, the stars that twinkle by night, the vast expanse of heaven, display his power, and greatness.

2. Since then God is incomprehensible, and the thought of him an unfathomable abyss where the line of reason can feel no bottom, yet at the same time an object obvious to our notice, and which it is highly incumbent upon

upon us to pursue so far as our faculties can reach with clearness, let us endeavour to separate what we find clear in our conceptions of him from what is dark and mysterious. And I believe this may best be done by considering him in two capacities, as Creator, and as Governor of the world: for creation being a matter whereto we find nothing similar in our experience, we have no idea of it, nor any thing belonging to it. We know that substances owe their existence and properties to an almighty power; but in what other manner they might have been created, or what others might have been added to their number, or whether any, or what inducement there was for creating them, we know nothing of. All the difficulties before started concerning absolute impossibilities, the necessity of previous objects to serve as materials for wisdom to work upon, the limitation of goodness, and origin of evil, relate to the first constitution of things; from which we had better withhold our thoughts, for the further we push them, the more we shall find ourselves entangled in perplexities and contradictions.

3. But the governance of the world lies [illegible] to our apprehension, as proceeding upon a constitution of things already established, disposing and giving motion to substances

stances according to the properties assigned them, ordering the laws of nature and directing events falling under our cognizance, and by various structures or combinations, either of matter alone or in conjuction with spirit, raising secondary qualities perceivable by our senses. For our own volition being determined by motives, and our actions constantly aiming at some purpose suggested either by fancy or judgment, we have no conception of a power exerted without previous objects to direct and guide it: which has given rise to the notion of a nature of things eternal and unalterable by any Will or power whatsoever. But we may escape this absurdity and bring our ideas to tally with one another by considering a Governor of the universe, working upon a nature of things already assigned him and acting according to certain rules established by the Creator from everlasting. I am far from intending hereby to divide the Divine Unity, or deny that it is one and the same God which created and still governs the world: I only propose this as an imaginary division rendering the subject more suitable to our narrow faculties, which may comprehend in part what they cannot compass entire. Nor do I see any hurt in imagining that to be two which we know to be in reality one, for we have observed formerly that

that our conceptions often vary from our knowledge, and may find further occasion hereafter to show that it is expedient they should do so. We conceive the sun to run his race every day through the heavens though we know the fact to be otherwise, for it is more convenient to speak and think of that seemingly little orb as moving about, and the wide stretched earth with all the buildings and mountains upon it as stationary. And so I apprehend it more convenient for our imagination to conceive the world and affairs of men administered by one power limited and prescribed to by another.

4. The Creator dwells in unaccessible light, where the eye of man cannot approach or sees little distinctly, being dazzled by the bright effulgence. We know that he is almighty, self-existent, uncaused, without beginning, and unspeakably happy, and this perhaps is all we can affirm safely concerning him: unless that to him belong those unknown attributes of which we can say nothing more than that there are such. He has established some things so firmly that their existence seems almost as necessary as his own: Time and Space, the imperfection of creatures, the relations between numbers, lines, angles, and forms, we cannot conceive ever to have had a beginning. His ways are unsearchable

unsearchable and his actions past finding out, therefore it is in vain to attempt accounting for his proceedings. We see there are substances around us, but why they were created in such numbers and no more, or with such particular properties and no others, or in such certain stations; why our ideas are variable and the face of nature continually changing; why productions are formed and events brought about, by a long chain of second causes, and not by an immediate exertion of omnipotence; why evil was intermingled among the good or in what exact proportion; of all these points we are utterly ignorant. Nor can we know any more concerning the time than the manner of creation, or determine whether the creatures may not have been co-eternal with the Creator: for though they be effects requiring an efficient cause to produce them, yet an effect may well be eternal where the cause is so. I could easily believe the Thames to have run eternally if I could persuade myself that the springs supplying it had flowed for ever: and if there had always been a sun there would have been no beginning of day-light. So, though the creation depended upon a superior power for its existence, it may nevertheless have subsisted from everlasting, because that power was never wanting whereon it might depend.

Nor

Nor let it be urged that the Will and good pleasure of God must set omnipotence at work before there could be any thing created: for when we reflect on the immutability of the divine nature, we can no more assign limits to the determination of his Will than to the exercise of his power. Therefore it behoves us to know our own ignorance, for this is the strongest mark of such wisdom as the frailty of human nature can rise to: as it is an instance of folly to conceit oneself understanding every thing and to decide confidently upon every subject. And if we be at all sensible of our ignorance we shall be very cautious in our assertions concerning creation or the Author of it, esteeming him an object of our admiration and adoration rather than of our enquiry. Nor need we be disturbed at the want of further knowledge, which could avail us nothing if we had it; for we must take things as we find them, our capacities and the qualities of other substances affecting us as assigned them, nor can we expect they should be altered to please us. If we know what are proper for our uses, how should we be the better for knowing why they were so constituted? If we can discern the sources of good and evil, this is enough to direct us what to pursue and what to avoid, nor could we do it more effectually

effectually were we able to trace those sources up to their original causes. Besides, when the Creator had laid the foundation of nature he rested from his works, and having once made us, retained, as I may say, no longer any concern with us, but delivered us over to that Providence which governs and disposes the things already created, exercises the capacities, and employs the qualities already assigned.

5. But the Governor of the Universe is a more discernible object, easier for our imagination to comprehend, clothed with milder rays of glory, the subject of our hope and confidence as well as of our admiration. For we may behold him provident, wise, gracious, and beneficent, protecting us against the confusion of Chance and hard hand of Necessity, having all nature under command, so that no disturbance or disorder can intrude against his liking. To him belong those attributes of which we can form any distinct notion: omnipotence, to give what motions and directions he pleases to substances, to change their situations and throw them into what combinations, or associate them with what company he thinks proper; omniscience, to discern at one glance the whole number of substances existent, their capacities, qualities, and positions; wisdom, to know

know exactly what secondary qualities will arise and what effects shall be produced by the operation and concurrence of second causes, so that among all the various impulses of matter and actions of spirit, nothing shall fall out contrary to his design and expectation; omnipresence, that nothing may escape his notice, but every particle of corporeal or spiritual substance be directed with the same vigilance as if it were the sole object of his attention; unwearied goodness, to provide all the happiness for the creatures which their capacities can receive or the preestablished nature of things will admit; and impartial equity to allot the just proportion of good and evil among sentient creatures, so as that none may have cause to complain at being unequally or arbitrarily dealt with. These things we find no difficulty to comprehend, and these are enow to assure us that the course of nature and fortune is ordered for the best, and that we live under a government which a prudent man would chuse for himself if it were left to his option.

6. To consider God as Governor of the world is the light wherein we ordinarily behold him, that which gives us the clearest conception we can entertain of him, which best answers all useful purposes, and has this peculiar advantage that it represents his goodness,

ness, the attribute we are most interested with, in the fairest colours, as attentive to produce all the happiness possible for his creatures in the nature and constitution of things. This, when well inculcated, satisfies the minds of the vulgar, and would satisfy those of the speculative too, if they would abstain from idle questions concerning creation, and forbear to ask why things are not otherwise constituted so that more happiness might have been produced than is now possible. For if we survey so much of nature as lies within the reach of our observation and reason, we shall find there is a balance of good sufficient to content any reasonable person.

CHAP. XIX.

EXTERNAL NATURE.

By Nature I understand here that disposition and order of things wherein we are likely to have any concern: so much of this as relates to ourselves in our present state of Being, we must discover by observation and experience, or learn from the information of others, as being our surest guides: for

no man who is going to the East Indies, recurs to theology to know what manner of living he may expect, but enquires of those who have been there before him; or if he find himself indisposed, applies to a physician, or recollects what has done him good on the like occasion formerly. But we know that this body of ours shall be dissolved, when whatever was of use or solace to it, shall be no longer serviceable: though the trees continue to bear fruit we cannot taste it; though the sun goes on to shine, we cannot see it; though trades and manufactures be still carried on, we can receive no benefit from them. Yet the Spirit shall remain entire with her two faculties of perceptivity and activity; but what organs, what instruments, what materials, she shall have to exercise them, experience informs us nothing of: for we have no ground to expect that any thing wherewith we have intercourse here, shall be the object of our perception or action hereafter. Nevertheless, our curiosity and concern for the future naturally incline us to look forward; but we find nothing affording any glimpse of light, unless in the character of that power which disposes of things visible and invisible: therefore, we must content ourselves with such judgment as we can form from thence of our future condition and expectations.

2. And

2. And this leads us to the consideration of final causes, which the most judicious persons have always taken into account, and made the principal foundation in forming their opinions concerning things invisible: for if at any time we can discover what are the views of our Almighty Governor, we may rest assured he wants not power nor wisdom to compass them. Some indeed carry this argument too far, applying it to the affairs of this world and inferring what is or shall be done from what they imagine should be done. Thus the Papists prove an infallible judge of controversies upon earth, because they conceive it necessary there should be one: and many good people expect deliverance from all distresses and injuries, or that in wars and contentions the better cause will always prevail, because they apprehend it agreeable to their idea of God that things should be so ordered. Our murmurings and repinings against Providence arise from our unwarrantable expectations, which upon finding them disappointed, tempt us to suspect the ways of Heaven unrighteous, rather than acknowledge ourselves mistaken in our idea of what righteousness requires. But our business here is to learn, not to decide, nor can we ever depend upon what will happen solely by our idea of final causes, nor otherwise than by remarking what has usually

happened in similar cases: for our knowledge of God and his proceedings is very imperfect at best, and he has given us experience and a capacity of observation to correct our errors in theory from time to time. But with respect to the invisible world, he has given us no experience nor means of observation; if we were ever there ourselves, we have utterly lost all remembrance of it; and those who are gone there before cannot return to communicate their discoveries: but he has given us some knowledge of himself discoverable in that portion of his work we have seen, and this we may depend upon in matters whereof we have no other evidence to direct us; for we need not doubt that he knows how to adapt his means to their intended effects, and therefore may be assured the knowledge we have is sufficient to answer our purposes, until we shall find him imparting future lights. It is true we cannot enter into the counsels of God, nor discern his manner of proceeding with the same exactness and certainty as we can the qualities of bodies and characters of persons familiar to our acquaintance; but we may reason upon them in many cases with a clearness that will work as full assurance upon the mind to the exclusion of all doubt, as even experience or demonstration: provided we keep chiefly in generals, and do not enter too minutely into

into particulars, which we have no opportunity of knowing nor are necessary to be known by us.

3. Our own final causes lie behind each other in trains, for we desire one thing for its tendency to procure another, and that other because it conduces to a third; but good, or satisfaction, stands at the end or every line, recommending the whole to our pursuit: nor can we conceive of Providence otherwise than as aiming its dispensations at particular purposes productive of others, and those again leading to others beyond: the business then is to settle with ourselves what we may reasonably suppose to be the point, answering to satisfaction in ourselves, wherein all dispensations ultimately centre. For we may immediately discern that this cannot be satisfaction, such as operates upon us, for the desire of satisfaction implies a continual want of something to better our condition, to make our lives valuable, and prevent our time from passing away unprofitably, but our clearest apprehensions of the Deity will not allow us to imagine him wanting any thing of his creatures, or capable of accession to that happiness he enjoys from everlasting in himself, or administering the government of the world for his own amusement, to pass his time more agreeably, to provide company for his conversation or produce

pleasures

pleasures from whence he might receive a moment's entertainment. This consideration overthrows the supposition of Glory, which some have made a predominant attribute and ultimate end of the divine views; for they say God created and still orders all things solely for his own Glory. But when we consider that a fondness for applause is a weakness in human nature, engendering pride, vanity, and affectation: which denote a little mind, that the sounder a man's judgment is, the less solicitous we find him to display his accomplishments to others, and that honour at best is but an expedient to supply the shortness of our views, and lead us into those courses which we want discernment to see the prudence of; we shall think it unbecoming to ascribe this motive to the most perfect of all Beings, with whom there can be no weakness or frailty, no concern lest he should miss his due tribute of praise, no loss or disappointment if it be not regularly paid. Nor do the phenomena of Nature agree with the supposition of such a principle, for of all the innumerable variety of creatures upon earth, man alone is made capable of acknowledging his Maker, and among men, how few are there that rise to conceptions worthy of him! far the greater part being drawn off by their occupations and necessary engagements

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in life from that attention they might else have given to his excellencies, and those few best furnished with opportunities of knowing him, how imperfect is their knowledge! perplexed with doubts and difficulties which they are forced to solve by their own incapacity and want of discernment. Nevertheles, I do not deny that God is extremely jealous of his glory, and does all things for that end, because he knows his glory is of the utmost consequence to his intelligent creatures: for entertaining unworthy notions of him, would fill them with darkness and despair, lead them into vices and fatal errors, induce them to break those laws he has established for their happiness, and introduce a general disorder and confusion: so that glory is a secondary and subservient to goodness, not an original principle, but springing from the love he bears to the works of his hand.

4. Wherefore goodness remains as the ultimate principle beyond that of glory, and though we have supposed an unknown attribute to set the measure to goodness, and restrain it from exhausting omnipotence; this belongs to the Creator whose ways are unsearchable, and concerning whom we can pronounce nothing safely: but the Governor of the Universe, we may apprehend as infinitely good, and if there should be any higher

higher source of his actions, we cannot trace it out, therefore must refer to this as the first motive of all his dispensations, and if there be any thing repugnant to goodness, we may be sure it will not be permitted. For we may conceive him producing all the happiness possible in the nature and constitution of things: only we must not expect his goodness should regard ourselves alone, for the nature of it, requires it to flow where the greatest numbers may receive benefit by it, where there are the highest capacities for enjoying it, and where it may be attended with the fewest inconveniences. For we may observe that good and evil often generate one another, but it is the whole design in view that denominates the action: he that mingles poison with a palatable dish, acts maliciously, though he does all in his power to enhance the present pleasure; and the surgeon who performs a cure by some painful operation, acts kindly, though he gives a present pain. And sometimes consequences of both kinds follow each other in succession, but they must all be taken into account, in order to determine the quality of the action: the physician who sweetens an emetic for a child, does not act unkindly though he entices him thereby to drink that which will make him sick at stomach, because he intends the removal of a disorder,

disorder, by bringing on that sickness. So the severities that befal us, or the pleasures that lead unwarily into trouble, may be instances of kindness, if in their whole consequences they tend to greater advantage than detriment: and that they do so, we may justly conclude from the character of goodness, which requires that every evil should terminate in good somewhere or other; and that if there be any which yield no fruits in this present state, they should produce a plentiful crop elsewhere, which will abundantly repay the trouble sustained by them here.

5. For, from the unity of the Divine Nature, we may justly infer, that the universe is one immense kingdom governed and administered by the same legislative and executive power: and though this consideration alone will not hinder but that it may be divided into many distinct principalities, each separate within itself, and having no communication with the rest, yet, when we reflect upon the mutual dependence of things in this world, and how much their interests are interwoven, we shall find reason to believe there is a like connexion of interests running throughout the whole. We commonly say, that all things were made for man, and so we well may provided we do not add, for man alone, but allow him likewise to be made for other creatures.

tures. The sheep and oxen feed upon his pastures; the horse receives provender and tendence from his hands; the birds eat the grain he sows; the little mouse shares in the provisions of his table; the swallow nestles under his roof; the mastiff and spaniel earn their wages in his service; the flea and the gnat regale on his blood; the harvest-bug burrows in his flesh; and his carcase breeds and nourishes the worm and the maggot. He employs his cares and reason to provide for the uses of animals subservient to his uses, and those of others he provides for in providing for his own. And there is a constant intercourse between the animal and vegetable kingdoms: man sows the corn that is the staff to support his life, plants and prunes the trees that yield him fruit, cultivates the flax that serves him for cloathing: the cattle manure the pastures that feed them, the birds carry about the seeds that grow up to supply their future occasions. It is thought the misleto would be lost out of nature if it were not continually propagated from tree to tree by the thrush. And every species of living creatures has an interest in the curious structure and alimentary qualities of those plants which furnish them respectively with proper sustenance. Nor are the properties and courses of the elements, the subterraneous works

works of nature in forming minerals, fossils, exhalations, and vapours, of little consequence to the things upon her surface: the blights that bring disease upon corn and trees threaten us with famine, that unknown vegetative principle promoting their growth, and making the difference between one soil or one season and another, fills us with plenty: the docility and capacities of brutes furnish employment and uses for man; the various passions and characters of mankind affect one another; and that long and intricate chain of events we call Chance or Fortune, determines the time and condition of our birth, and influences us in every part of our lives.

6. Thus nothing stands alone, but each depends for its preservation and welfare upon many others around, with which it stands in some respect or other connected. From hence we may gather a little more knowledge of nature than we could by a bare contemplation of the final cause: for goodness would have been equally satisfied whether the due measure of happiness had been dealt out to the creature directly by an immediate act of omnipotence, or conveyed by the intervention of second causes, or how many soever of them had intervened to operate upon one another. But since we find that God governs by a long subordination of second causes in this

this spot of nature exhibited to us for a spectacle, we may reasonably presume he takes the like method in other parts of his dominion. And we may observe, that he not only employs a concurrence of causes to produce one effect, but likewise produces various effects from one and the same cause. The air that supplies us with breath assists the growth of vegetables, sustains the clouds and vapours, and purifies the earth with its continual agitations: the sea that contains the stores of rain and dew, that wafts our ships from coast to coast, serves likewise as an element for the fishes: and there are seldom any events befalling among mankind, which concern no more than a single person. From hence we may infer the probability of there being other uses in the works of nature, besides those we discern, much more that there are uses where we cannot discern any.

7. It is this manner of proceeding by second causes that discovers the divine wisdom, which could not so well be manifested by a direct exertion of omnipotence: the raining manna from heaven might display power, and a kind concern for the wants of mankind; but it would not give evidence of wisdom like the admirable contrivance in a grain of corn, made to protect and nourish the tender germ, gifted with little tubes for straining such earthy

earthy particles as are proper for our sustenance. If almighty power were employed at every turn, there would be no room for wisdom, because nothing more would be requisite than to choose what should be done, and to do it accordingly: as a man who carries a bowl in his hand wants no skill to place it where he has a mind; but if he rolls it along the turf, he ought to know exactly the inequalities of the ground, and what force and direction must be given to make it rest just in the spot where he would have it lie, much more when a multitude of causes are set in motion to produce a variety of effects, does it require a consummate wisdom to adjust them so nicely as that nothing may fall out contrary to intention. And the subordination of causes gives admittance to subordinate ends, wherein we may sometimes discover a wisdom and contrivance in the manner of compassing them, though we cannot trace their tendency to the ultimate end: for we may discern a curious contexture in the parts of weeds and noxious plants, of toadstools and moss, of pyrites and other useless productions of the earth, though we cannot see wherein they promote the benefit of any sentient creature.

8. But

8. But wisdom cannot be disjoined from goodness, for it must have some purpose to proceed upon, and none other can be conceived worthy of it: it may direct to proper means, and so far furnish itself with employment in supplying other means to procure them, but must receive its ultimate end from some other quality. Wherefore the most considerate of mankind have laid down as an incontestable maxim, That nature does nothing in vain, by which must be understood unproductive of good, either directly or remotely, for this would be vain with respect to the point it has ultimately in view. And Plato, with some others, carried this notion so far as to say, that if any single event had happened otherwise than it did, the whole universe would have been damaged thereby. Whether we may run such length as to assert that every creature has some concern in every dispensation that happens, there is no occasion to examine; but our idea of infinite goodness warrants us to suppose that the course of nature or fortune could not be altered in any particular, without a loss of happiness somewhere or other: and this supposition will necessarily infer an intercourse of interests between the known world and the unknown. For we find nature often defeated of the purposes she seems principally to have intended;

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she forms her grains of corn in a manner fitted for producing plants of their different kinds, but how few of them ever attain that end? Such as man employs in his uses make no difficulty, for we suppose her to have had the service of man in view equally with the continuation of the vegetable species: but what quantities are destroyed by blights, by mildews, by storms, or scattered about by accident, where they neither grow up to fill the reaper's hand, nor yield a sustenance to any creature! She forms the eggs of birds with curious integuments, one within another, to foment and nourish the growing fœtus: for such of them as man converts to his uses we think her pains not ill bestowed; but how many of them are addled, chilled, or broken, unprofitable either for the nest or market? What multitudes of fruits of all kinds fall to the ground, where they decay and perish without being of service either to man or beast! What quantities of fertile soil are annually driven down into the sea! What havock do tempests, inundations, and earthquakes make, as well among the works of nature as of human industry! In short, there seems to be a general waste around us, a great deal of pains and contrivance thrown away, and half the provisions that are made fall short of their destined purpose. If we turn our thoughts to man himself

self we shall find, that after all the wonderful cares of nature to form children in the womb, many of them never come to the birth; of those that do, one half are cut off by diseases, accident, or ill management, before they arrive at the use of reason. Sleep renders a considerable part of our time useless; many of our waking hours pass irksome and insipid, unprofitable to others, and unpleasurable to ourselves. Ignorance and error frustrate half our undertakings; infirmities, passions, and fantastic humours, make us troublesome to one another. Such observations as these have tempted men to deny a Providence; and Lucretius urged it as an argument that the world could not be made in wisdom, being so full of faults. But we have too many proofs of a superintending vigilance in the many provisions actually tending to our preservation, our sustenance, our accommodation, and our enjoyment, to be overthrown by these negative ones to the contrary; from which we may more safely infer, that Providence has something else to take care of besides ourselves; therefore all cares are not thrown away which do not turn to our particular account.

9. I know that such as set themselves impartially to examine the ways of nature, daily find more and more uses in things that at first appeared nugatory: but some of the phenomena

mena are of such a kind as not to be applied with any colour to the benefit of man, and many, wherefrom we do receive some use, are of too noble a fabric for us to claim them as our sole property. Man has no further concern with this earth than a few fathom under his feet; was then the whole solid globe beneath made only for a foundation to support the slender shell he treads upon? Do the magnetic effluvia course incessantly over land and sea, only to turn here and there a mariner's compass? Are those immense bodies, the fixed stars, hung up for nothing but to twinkle in our eyes by night, or find employment for a few astronomers? Is that prodigious effusion of light darted every way throughout the expanse of heaven for no other purpose than to enlighten and cherish two or three little planets? Does the vast profundity of space contain no more inhabitants than we see crawling about us, or may conjecture abiding on other earths like ours? Surely he must have an overweening conceit of man's importance, who can imagine this stupendous frame of the universe fabricated for him alone: and he must be too partial an admirer of visible nature, or entertain too mean an opinion of infinite wisdom, that can persuade himself things could not have been contrived better for the accommodation and happiness

of man, had he been the sole object of the divine attention. To consider only the turns of the human Will, which constantly follows present motives and judgments, would any body deny that man's understanding could have been more illumined, and his imagination rectified, so as clearly to discern, and strongly to desire, his truest interests, and this alone might have made a paradise upon earth without changing the face of nature.

10. Nevertheless, we may so far acknowledge all things made for man as that his uses are regarded conjointly with those of other creatures, and that he has an interest in every thing reaching his notice, either for the sustentation of his body, the improvement of his mind, or entertainment of his thoughts. We know he has some concern with the remotest objects; the satellites, that turn the night of Jupiter into day, assist him in ascertaining the longitude, and measure for him the velocity of light: the mighty Sun, that like a giant holds the planets and comets in their orbits, enlightens him with its splendor, and cherishes him with its warmth; the distant stars, whose attraction probably confines other planets within their vortices, direct his courses over the boundlesss sea and the inhospitable desert, and display the magnificence of that power which stationed them. Nor can we suppose

suppose him forgotton in the laws respecting other worlds, which are so framed as not to interfere with his interests, or infringe upon that measure of good thought proper to be allotted him: for the omnipresent vigilance of our Governor overlooks nothing, and his wisdom is so consummate as to form his several systems complete, without their disturbing or breaking in upon one another.

11. But it is the narrowness of our understandings, confined to work upon such materials as are thrown in by the senses, that makes it difficult to conceive there should be creatures totally different from those falling under our observation for Providence to take care of, and therefore we expect that every provision of nature should be calculated solely for our uses. For many ages this little spot of earth was thought the only habitable part of the universe, nothing else being deemed capable of receiving a colony. Xenophanes was laughed to scorn for asserting the Moon bigger than all Peloponesus, as an absurd and extravagant notion: and though later discoveries have persuaded many persons of the Planets being habitable earths like ours, yet they think no further than of peopling the surfaces of them conformably to what we see in this of our own, and even

this appears a wild imagination to common apprehensions, which cannot deviate a step from the track whereto they have been accustomed. Epicurus insisted there could not be intelligence out of the human shape, because he had never seen a reasonable creature of any other: and we cannot comprehend an animal without muscles, fibres, vessels, and organs, such as we find in those we are acquainted with. I suppose if we had never known of fishes we should have been positive that life could not subsist without air to breathe, or that there could be generation without sexes if we had never heard accounts of the Polypus. But who can set bounds to Almighty power or reckon up all the varieties that infinite wisdom can contrive, or show the impossibility of organizations dissimilar to any within our experience? Who knows what cavities may lie within the earth or what living creatures they may contain, endued with senses to us unknown, to whom the streams of magnetism may serve instead of light and those of electricity affect them as sensibly as sounds and odours do ourselves? Why should we pronounce it impossible there should be bodies formed to endure the burning Sun, to whom fire may be the natural element, whose bones and muscles are composed of fixed earth, their blood and juices

juices of molten metals? or others suited to bear the frozen regions of Saturn, having their circulation carried on by fluids more subtile than the highest rectified spirits raised by chymistry?

How does it appear nesessary that sensation must come by that long train of channels leading into one another through which we receive it? The light strikes upon the corneous tunicle of the eye, thence passes on through the aqueous, the chrystaline, the vitreous humours till it falls upon the retina, there it excites tremulous motions, which are propagated onwards in winding mazes along the optic nerves quite to the brain, causing it to excite the sensation of sight. The mind receives her notices from particles penetrating or lying contiguous to her, such as their modifications are, such from time to time are her perceptions, and why may not they take various modifications from the action of external objects without that tedious process of organization employed in terrestrial animals? Hartly and some others pretend to demonstrate that sensations and all our ideas are produced by an ether lodged in the interstices of our brain: if the case be so, when disengaged from the grosser parts of our machinery, we shall have a denser ether surrounding us, which might excite stronger sensations and of other kinds than

than any we now experience. May there not be bodies fitted for the purposes of sensation and reflection, consisting of simpler organs, and lying within a narrower compass than any thing we can imagine, all eye and ear without, all memory and understanding within, small enough to permeate the densest metals with the same ease as we walk about in a grove of trees, too minute for wind to take hold of or fire to penetrate and rend asunder, which may expatiate in the boundless fields of ether and find a pabulum there to support them, or have such contexture as not to be liable to continual waste, and consequently needing no recruit? Or who will undertake to demonstrate that spirits may not act and perceive without any organs at all, finding objects for one faculty to discern, and subjects whereon to exercise the other, in the particles passing perpetually through the sphere of their presence? or that they may not affect one another with perceptions in greater variety and vigour than we receive them from the play of our organs? not vitally united to any system of matter, but joining themselves occasionally to whatever falls within their reach, whereby, if locomotion be expedient, they may transport themselves easily from place to place; for considering the swift and incessant fluctuation

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of many subtile fluids in all directions, they need never want a conveyance to carry them whithersoever they desire.

12. It is true these are all no more than possibilities, nor do we pretend to bring evidence in proof of their being fact; but the suggestion of a possibility which cannot be contradicted is enough to convince us that we have not the whole extent of almighty power in our view, nor all that nature can perform exhibited in the scenes she has displayed before us: for we find there are other ways of proceeding feasible, and if she has chosen none of them, it may be because she has still others in store whereof we cannot form the most distant imagination. But that she has other methods of supporting life and dispensing enjoyment unknown to us, we may satisfy ourselves from the vast profusion of second causes she puts in act, yielding no proportionable benefit to the reptiles on this lump of dirt, nor any others we can reach with our glasses or our conjectures. So that in our Father's house are many mansions, many not only in number, but in variety of plan and disposition, built partly of the same kind of stone and timber, but fitted up diversly according to the occasions of the respective inhabitants, and serving for little else than ornament to the rest. Since then

then there are mighty works fabricated which contribute little to our uses, but we must conclude from the principle of nothing made in vain, that they contribute more largely to those of other creatures, this evidences a connection between the two worlds in having so many things the benefit whereof they share in common. Nor is it probable only that the several systems of Beings have partly the same materials supplying their conveniences and enjoyments, but likewise that their actions in the consequences of them mutually affect one another. It were mere guess-work to go about explaining in what particulars this happens, all that we can pronounce assuredly is that we are equally incapable of discerning whether what passes among other Beings does or does not concern the affairs of men: whether, as toads and adders suck up the poison from the earth, there may be some invisible animals which purify the air, or else prepare it for our respiration as milk is prepared for our nourishment by passing through the bodies of cattle; whether the emission of rays from the sun be owing to the action of some creatures upon his surface; or whether the ministry of substances purely spiritual be employed in the four attractions and putting other laws of matter in execution.

13. But

13. But there is one respect wherein it cannot be doubted that other Beings have concern in what happens among us. Whoever admits the doctrine of final causes and nothing made in vain, will scarce imagine that our two faculties of perceptivity and activity were given us only for a few years employment upon this sublunary stage, to lie buried ever afterwards in eternal sleep, but that the soul upon quitting this country passes into some other, whose districts are continually peopled by colonies sent from hence. Now when we reflect how much the births and deaths of human creatures depend upon the constitution of nature and disposition of affairs here, how men encrease and multiply more or less and their lives are lengthened or shortened by the condition of the air, fertility of the soil, concurrence of accidents, regulations of states, introduction or decay of arts and sciences, manners and customs, humours and fancies, virtues and vices, prevailing among them, it will appear that the inhabitants of the other world are interested in all these things, to have them so disposed as that our annual exports may just answer their demands. Nor is it likely they are concerned only with the numbers and times of our migrations, but likewise with the qualities and characters of the new comers to be incorporated

rated amongst them. We see that nature forms none of her productions at once, but brings them slowly to perfection by many gradations rising upon one another: the seed shoots up a little bud, from thence springs forth a slender twig, which by degrees hardens into a stem, spreading in branches and leaves until it becomes a full grown tree: the little animal comes into the world small and feeble, but grows through several stages to full stature and vigour: our judgment takes forty years in maturing by the rudiments of infancy, the improvements of education, converse, and experience. When the plant has stricken root, the seed that before involved it rots and perishes; when the chicken is hatched, the shell and other remains of the egg crumble and moulder away: so we may presume that this gross body of ours, which will decay and return to dust, is an integument to preserve and form the embryo of some future animal.

We know of but one pre-existent state, I mean that of the womb, and though it be not clear, what Hartley's German friend, Stahl, affirms, that all the automatic motions of the heart, the arteries, the glands, the digestion, were originally voluntary actions of the child, yet we must needs acknowledge that upon what passes there, depend our constitution,

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our strength, the acuteness of our senses, the quickness of our parts, the retentiveness of our memory, much of our passions, desires, and tempers: and by parity of reason we may infer that upon what befals us here, depend our constitution and all that may be called the natural endowments we shall be born with into another state. Some skip over life entirely, passing directly from the womb into the other world; some are allowed but just a taste of it, being snatched away in their infancy, conversant only with a few objects striking their senses, unexercised in their understandings and unpractised in the ways of men: and of those who fill up their full term of years, how various are their professions, their manners of living, and ways of thinking! From whence it follows that not only this life in general is preparatory to the next, but each man's particular fortune is calculated to fit him for the functions he is to fulfil hereafter, and that there is a society wherein the talents of individuals are given for the service of the whole: so that, like the Israelites gathering manna, he who carries little away with him has no lack, and he who carries much has nothing over. Nor is it necessary the consequences of human action should be confined to himself or his future compatriots; for nature works several uses by

by the same spring. The sheep applies diligently to his pasture, and thereby fattens his flesh and lengthens his wool for the service of man: the silk-worm weaves her web for a safeguard to herself, and at the same time furnishes us with materials for our cloathing and ornament: the fly injects her juices into the oak leaf to raise an apple for hatching her young, and therein supplies us with ink for our correspondence and improvement. So man by his ploughing, his planting, his felling, his burning, his draining, his mining, his manufacturing, may be reckoned among the second causes operating upon matter wherein the invisible world has some concern: nor are there wanting Beings to whom his joys and sorrows, successes and disappointments, frailties and miscarriages, may serve for a spectacle, an instruction, and a warning.

14. In short, the more we contemplate the complication of interests, of causes and effects in the visible world, the more ready we shall find ourselves to take this for a sample of the whole: and the more we reflect on the character of goodness and wisdom, the more easily we shall persuade ourselves that every provision terminates in good worthy the largeness and extent of it; that whatever brings evil, or little advantage, or none at all to man, redounds to the greater benefit of something

thing else; and whatever appears unaccountable, either in the works of nature or courses of fortune, has a purpose which it does not fail to answer. Thus we may look upon corn and cattle as made for the uses of man, because he receives his uses largely from them, but the central earth which serves him only for a basis to support the ground he stands on, the vast effusion of light whereof a few rays only reach his eyes, the wide extended constellations which furnish him with nothing more than a spectacle to admire, must be designed chiefly, and those more distant stars beyond the reach of human ken solely, for the service of other creatures: and man himself, much of whose time is lost in sleep, whose actions are in great part unavailing or even hurtful to himself, must be supposed set at work for the benefit of some invisible Beings. Yet as the brutes have their enjoyments while employed in the service of man; the ox indulges his appetite in fattening flesh for his master's table, the hen gratifies her desires in hatching and breeding up chickens for the larder: so care is taken that man shall enjoy all the accommodations and happiness consistent with the services he is destined to perform.

15. Thus

15. Thus the dispensations given to the several sets of creatures regard partly themselves and partly the interests of other species, and it may naturally be expected that those of the highest class should be preferred: for mischief falls lightest upon the dullest capacities, and the interruptions occasioned by pain make the least loss of time to those who have the least important and delectable employments, therefore wisdom and goodness require that evil should be lodged there where it does the smallest hurt. When we consider how much of skin, bone, and tunicle, how much of vital juices, flesh, and parenchyma, enters into the composition of all terrestrial animals, we may look upon them as upon a man encumbered with a load of cloaths, who cannot have so quick a feeling through them as he might upon his naked body. An organization framed all of nerve and fibre must strike stronger sensations, and unembodied spirits receiving their notices from one another must have more numerous, clearer, and livelier perceptions than any we experience. So that man, although the highest actor upon this sublunary stage, has perhaps the lowest stage to act upon in the whole theatre of the universe. From these considerations joined to our idea of infinite goodness

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we may reasonably conclude that evil, although here bearing an inconsiderable proportion to the good, is still more thinly scattered in other regions of nature; and the most thinking and considerate persons, from earliest antiquity, have been persuaded that there are some states of Being abounding in unmingled happiness, without any tincture of uneasiness or suffering.

16. We have observed before, that some have ascribed the origin of evil to our immersion into matter, and to the ill use of our active powers; but though these cannot be assigned to account for the first origin, they may well be the channels through which it is dispersed among sentient Beings: and the last, as has appeared upon our examination of human nature, is consequent upon the first, for it is the obstinacy of our habits, and turbulency of our passions, deriving their strength and violence from the state of our organs or courses of our animal circulation, that raise those inordinate desires continually leading us astray. But the inhabitants of the visible world, being more deeply immersed in matter than any others we can imagine; and having many parts in their frame not subject to the action of the mind, must be supposed to receive more copiously

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of the noxious stream flowing from that channel.

17. But when we consider what is probably the use of evil, namely, to excite the mind to bestir herself in avoiding it, there does not appear a necessity it should be dispersed everywhere, to answer that purpose. Satisfaction and uneasiness are the two hinges whereon our actions turn, nor can we conceive any creatures so constituted as to proceed upon other motives: if there were no mischief to be feared, and no loss of satisfaction to be incurred, there would be little inducement to act at all, for why need a man do any thing who is in a state of complacence from whence he can never be removed? He that should have no notion of danger would run among horses and carts, into the fire, and all kinds of mischief: and he that should think his pleasures could never depart from him would take no pains to secure them. But though the knowledge and apprehension of evil will suffice to put us in motion without feeling it ourselves, there must be real suffering somewhere to raise that apprehension. Yet a little actual evil may spread the idea of it very wide: if one man hurt himself grievously by his carelessness or obstinacy, it may make thousands

sands sensible of the danger attending such a behaviour; and the mischiefs befalling one set of creatures may inspire others with a caution to guard against their approach. For the avoidance of evil having so large a share in the action of spirits, may justly persuade us, that those placed in the best conditioned state are liable to innumerable mischiefs, but such as they can easily escape, and therefore make no diminution of their happiness; but the idea of danger, prompting them to take measures for escaping it, they receive from the contemplation of actual suffering among inferior Beings, not from an experience of it in themselves. Since then a few objects may suffice to furnish matter for that contemplation, we may suppose them exhibited by creatures deeply immersed in matter: and that there may not want samples of evil in all the regions of the universe, the stars are stationed at immense distances, which, by themselves or the planets rolling round them, are fitted for the reception of such creatures. The repugnance of evil to our ideas of goodness I think will warrant our extending the supposition of it no further than necessity requires, and we see this necessity does not hinder our confining it to the regions of gross matter, which will reduce it within a very

narrow compass: for if every thing corporeal, within the orbit of the furthest Comet, were compressed into a perfect solid, I suppose it would not form a mass bigger than the body of the Sun, then the proportion this bears to the whole solar vortex will exceed the proportion of evil in nature to good, because even embodied creatures have their balance of enjoyment in life. Nay, we might have grounds to hope that this gross corporeal state is the only seat of evil in nature, and from the moment we get rid of it we shall continue exempt from all mixture of uneasiness; but we shall find reasons by-and-by to caution us against too great security, for that there are states of suffering elsewhere, into which we may plunge ourselves by carelessness and ill management.

18. Nevertheless there is no reason to imagine from any thing occurring either to our observation or our thoughts, but that there are more states of complete happiness than of suffering, or those containing a mixture of both; or else that the former are infinitely fuller stocked with inhabitants: for this idea agrees best with our notion of infinite goodness, which we must take for the foundation of our theory in matters whereof experience gives no information.

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But what measure of evil is found necessary in nature stands confined to particular forms of Being, so that a few regions share the whole of it amongst them: nor will this appear an unequal distribution since the same inhabitants migrate from one region into another, whereby every one has an opportunity of taking his full share in the good as well as in the evil; and many glorified spirits have attained the height of happiness by passing through the vale of misery. If such Beings are totally disjoined from matter, and receive their perceptions by communication from one another, we may reasonably suppose them equal in their condition and their enjoyments; for we know of no difference in the capacities and primary properties of spirits, and cannot well imagine them partial in their dealings among themselves. Hence it follows there must be one or more intermediate states to pass through, wherein the lot of individuals is unequal; for inequalities here require the like inequalities elsewhere, that every one's account may be set even at some time or other. But this consideration alone does not make it necessary that evil should extend beyond this terrestrial mansion, for the balance may be brought even, as well by an

abatement of good as by actual suffering. He that has struggled here with disease, misfortune, and distress, may have ample amends made him in his next state, by receiving a larger share of bounty than others around him, although the portion allotted them be not alloyed with any pain or uneasiness. For an increase of enjoyment will repay actual suffering; and so we often judge ourselves, when we choose to pass one day disagreeably, for the sake of more than ordinary pleasure in the next, rather than pass both in our common amusements.

19. Nor is it a contemptible argument of this terrene habitation being the lowest part of the creation, that so little value appears to be set upon life by him who is the best judge of what is valuable: every one takes notice upon how slender a thread it hangs, daily liable to be snapped short by a thousand accidents. Few complete their full term of years; one half never arrive at manhood; and multitudes are denied an entrance into the world at all. We may observe nature almost as careful to provide for means of destruction as preservation: ravenous beasts, venomous animals, and poisonous herbs, are fitted for instruments of death; diseases, famines, wars, damps, suffocating vapours, and pestilential

tilential airs, sweep away by numbers: appetite urges men to pernicious excesses: many necessary occupations run them into dangers; folly leads them into fatal errors; vice plunges them into destructive courses; even virtue sometimes drives them upon hazardous enterprizes. So that life seems to be given, not for the benefit of the individual, but for some service done therein to the whole: and those enjoyments poured plentifully upon it, proceed from that unbounded goodness which appoints wages to every service, and comforts to render the burden of it easy; and one might beal most tempted to believe, with some of the ancient sages, that the luckiest thing could have befallen us, was never to have been born, and the next lucky, to have been taken away again immediately.

' 20. Now to sum up the whole of what has been offered in this chapter; we may gather from the perishable nature of our bodies and durable nature of our minds, and little use appearing in many extensive and operose productions observable around us, that there are forms of Being besides this, wherewith we are invested: from the method constantly taken by nature of bringing her works to perfection slowly through several stages,

stages, of generating one thing by the corruption of another, and the mutual dependance between the several parts of this visible world, that there is a like connection of interests running throughout the whole: from the gross composition of our frame taking in notices only through a few very complicated channels, that we may be capable of stronger, clearer, and more variety of perceptions than any we now experience: from the nature of the mind that it was designed for action, from the nature of action that evil is a necessary inducement to excite it, and from the nature of judgment which renders the idea of hurt without actual suffering a motive urging to avoid it, that a very little quantity of evil may suffice to set the spiritual world in motion. Thus far we discover what may be, but not so fully as to satisfy us in the main point we want, for the quicker sensibility of a refined state may render us liable to acuter pains as well as more exalted pleasures, and the greater variety of perceptions may give room for more of the irksome as well as the agreeable kind, nor can we see enough of second causes to discern what proportion of evil they tend to produce. But when we raise our thoughts to the First Cause, and contemplate the character

racter of wisdom and goodness therein, manifested by the works of which we have familiar knowledge and experience, our possibility turns into assurance: for they will not suffer us to entertain a suspicion of evil being inflicted needlessly, or dispersed in greater quantities than the welfare and good order of the whole creation require. Therefore we may look upon the enjoyments dispensed in every state of Being as given for the sake of the members, but the troubles and uneasinesses annexed as a means conducive to the far greater benefit of some others.

21. Nor need we perplex our thoughts with enquiring whether things might not have been originally so constituted as that evil should not be necessary for the production of any good: for if every hurt yield a greater advantage elsewhere and we ourselves have an interest in whatever redounds to the good of the whole, this may make us contented under it as long as we can retain a firm and lively persuasion of its so doing. I do not expect that this should entirely take off the smart of every violent pain, or weight of every pressing uneasiness: for evil were no evil, nor the good purposes intended by it answered, if a remedy were constantly afforded to prevent it from hurting: but whenever we

we have the free use of our thoughts, these reflections may give us a favourable opinion of the universe, whose regulations, are all established in loving mercy and kindness, and a reasonable expectation of exchanging our present condition for a better; provided we do not by our own ill conduct, cast ourselves upon those few inhospitable spots, which are the sink of nature, as draining away all the evil from the rest. But our hope and dependence rests solely upon the character of our Governor, not upon any thing we can discern in the tendency of second causes to our advantage: yet this need not disturb us; for if we receive good it is no matter of what sort, or by what instruments or channels we receive it. He that should be assured of an ample supply from a wise and indulgent parent, need not be anxious whether it were to come by the post, or the carrier, or an express messenger; whether in money, or negotiable notes, or marketable wares. Therefore we may content ourselves with the assurance of happiness in general, having no clue to direct us to the particulars whereof it consists. Our reflections and sensations here come to us by corporeal organs, which we must expect to leave behind, and without them there can be neither eating nor drinking, marrying nor giving

giving in marriage, gardens nor prospects, writing nor language, but every thing to tally dissimilar from what we now experience: and the occupations and enjoyments of another state, as well in kind as degree, such as eye hath not seen nor ear heard, neither hath it entered into the heart of man to conceive.

CHAP. XX.

HYPOTHESES.

NEVERTHELESS, the heart of man finds little scope for contemplation, without a prospect of something it can conceive; for imagination wants a ground more solid than mere abstraction to walk upon. Though complacence be the only thing valuable to the mind, we can never obtain it without some other perception to usher it in, nor can we be pleased without some agreeable sight, or sound, or taste, or event, or reflection, to please us; and when we go to frame the idea of pleasure, we find ourselves unable to do it unless by recalling another idea of those things that

that used to introduce it. Therefore, as men turn their thoughts upon another state, they find ideas rise bearing a similitude to what they have known in the present, and moralists comply with the bent of human nature in this respect, leading imagination in such tracks as she is capable of pursuing; for finding naked happiness too thin for the mind to lay hold of, they represent it under such veils as may render it discernible. Hence arises the so common use of figure, allegory, fable, and parable, which shadow forth things unknown, by allusion to things well known and familiar; and are not intended as an exact description of what shall happen, but only to give an idea of the joys that shall be received by comparing them with those we should receive in the circumstances represented. Therefore, when we are told of sitting in white robes, with palms in our hands, near the throne of glory, this is not to be understood literally: but only to signify that the pleasure to be expected will not fall short of that a common man would feel, if honoured with such array and such a situation. Therefore, those are to blame who draw conclusions concerning the manner of existence in other forms of Being from the expressions used in parables: and those who employ figures, ought to be very careful in choosing such as may not hurt the

the imagination by leading into gross ideas that will have a bad influence upon the conduct.

2. But figure and parable being employed occasionally, and often varied as occasion requires, men of thought and contemplation, desirous of forming their ideas into a regular plan which may serve them upon all occasions, invent hypotheses comprizing in one system all that they can imagine concerning things unknown. So that Hypothesis is a kind of continued allegory, connected in all its parts, calculated to answer all the purposes intended by it, and formed upon one uniform design. It differs from Fable and Parable in this respect, that fable represents an action impossible to have been performed, parable one that is possible and similar to those frequently happening, but not proposed to our belief as an historical fact; whereas hypothesis exhibits such a representation of things as may be the real case for any thing that can be shown to the contrary. It requires no positive evidence to build it upon, the framer of it being always looked upon as a defendant, and the burden of proof lying upon him that would overthrow it: but its strength lies in the consistency and mutual dependance of its several branches upon one another, its not contradicting any known phenomena

phenomena or received principles, its helping to join into a regular body those which before were detached and independent; and is thought to receive great conformation if it can be made appear an improvement or explanation of former hypotheses embraced by men of judgment and reputation. Your hypothesis-makers are commonly so fond of their schemes as to take them for demonstrations, and try the truth of every thing else by its conformity therewith: but this is an abuse, for hypothesis requiring no certain proof, nor any thing more than plausibility, cannot justly be offered to prove any thing certainly; nevertheless I think it may be brought in support of truths for which we have a solid foundation elsewhere, to make them more clearly apprehended and more readily received. For as the law admits of parole evidence in favour of an heir or an executor, but not against them, so the tissues of imagination may be employed to adorn and illustrate what solid reason has established, but not to cover it over nor as a foundation to support any superstructures of itself: they may rather be looked upon as engines of rhetoric to familiarize and persuade, than as weapons of logic to overthrow and convince; yet in this capacity may perform excellent service, by turning the conviction

viction of important truths into an habitual persuasion.

3. Nor should their be caution wanting against throwing in too many particulars, for the more of them there are to maintain, the more difficult it will be to ward off the attacks of an adversary, and if he can undermine any of them it will bring a disrepute upon the whole. The general laws of nature affecting all her inhabitants can be supposed but few, nor can there be many instances of resemblance imagined between the visible world and the invisible. For most of our employments and ideas must be peculiar to ourselves, as springing from the constitution of our present frame, composed of complicated organs affected by our animal circulation, and a gross body subject to many wants requiring materials and long preparations to supply them. The vibrations of air are not likely to affect us with sounds, nor the rays of light with colours; nor savours, odours, or tangible objects, to operate upon us in the same manner they do now. The cares we take for cloathing our backs, the provisions we daily make for our stomachs, will be no longer needful. Honours, preferments, estates, trades, professions, that now take up the time and thought of men, will cease: nor will there be room for the arts and sciences, which

which find their encouragement in the uses and conveniences they procure for life: neither can we converse together in the manner we do now, after having lost the organs of speech. And when we consider how much our organs of reflection are affected by the state of our bodies, how much our knowledge depends upon the traces remaining fresh in our memory, we cannot expect to carry our mental acquisitions with us, nor to think and reason in the manner we do at present. Therefore we can hope at most to frame but an imperfect and partial account of matters wholly unknown to us, and if we can do this so far as to give a general idea that there may be methods of employment and objects productive of happiness, it will suffice for the purpose intended.

4. Nevertheless, it can scarce be doubted there are some general laws running through out the creation, which to distinguish from the municipal, prevailing only in the regions we inhabit, seems the proper province of philosophy. We receive all our perceptions here from the action of body, they varying as that is variously modified: the like source then may be presumed to supply us with perceptions in another state, perhaps by modifications very different, exciting in us sensations and reflections whereof we have

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no knowledge now. The pleasures of life for the most part lie in exercises of our activity, nor is there cause to deny this a general law which will never leave us destitute of employment, in providing for our benefit and avoiding our hurt, how much soever the goods, and evils, and measures, respecting them shall then be dissimilar from those which engage our attention at present. We have a curious contexture of organs, serving as a medium or channel of conveyance for the impulse of external objects, which cannot come near enough to operate upon us directly; and though we know this will be dissolved, what should hinder but that another may be provided for us which shall perform the same office more perfectly, without that long transmission of objects from one vessel to another, whereby their appearance may be altered and we made to discern them otherwise than they are. We have risen here from the mere vegetative condition of a fœtus to the helpless simplicity of an infant, and afterwards by many gradations to the maturity of manhood; from whence many judicious persons have augurated that we are in the ascending part of our orbit, expectant of further improvement in the next stage assigned us: not by advancing onward in the progress we have already begun, for our

our present knowledge and habits scarce seem likely to prove of future use to us, but by being endowed with quicker parts and higher faculties capable of making larger acquisitions than any known among the sons of men. Thus by observing what circumstances of our present situation are not necessarily confined thereto, we may take rise from them in framing a system, which may be such as shall receive a good countenance from them though perhaps not an infallible proof.

5. Since the method of hypothesis has been fallen into more or less by most who have attempted to treat of the unknown state, and since there is a good use to be made of it, why should I be debarred the liberty of trying my hand as well as another? But I shall use my liberty sparingly, observing the rules and cautions before laid down, regarding use rather than curiosity, and forbearing to launch into minute particulars which may be either unwarranted or inexpedient. For imagination may be lawfully employed in the services of reason, but ought to be restrained from all sallies which those services do not require. I have endeavoured all along to draw my reasonings from observation and experience in as close a deduction as I was able, and intend adhering to the like

like method for the future: therefore, if I should be catched hereafter at proving any thing from hypothesis, it must be looked upon as an inadvertency, for I expect no more therefrom than to render those truths more intelligible that have their foundation elsewhere. We have already seen reason to conclude from the contemplation of that Power which governs both worlds, that they stand connected in interest with one another, and that what befals us in this will affect our condition in the next; and I propose no more now than to draw a slight sketch, which may make us more sensible how this may be effected: for a general idea of mutual dependence weighs but little upon the mind, unless we can imagine some particular ties whereof it consists; and as physicians mingle their subtiler medicines with more solid ingredients that they may not be lost in the mouth, so our abstracted ideas must be cloathed with others more sensible to make them sink down into the imagination.

CHAP. XXI.

VEHICULAR STATE.

WHEN death puts an end to the animal circulation, we see the body remains a mere lump of sluggish matter, showing no signs either of perception or activity, from whence we naturally conclude that the spirit is departed from her: but whether or no it carries any thing away with it we are wholly uncertain; we see nothing fly off upon the last groan, but our senses are not acute enough to assure us that nothing does fly off. Therefore, by virtue of the privilege constantly claimed in making an hypothesis, I may fairly assume, what nobody can disprove, that the spirit, upon quitting her present mansion, does not go out naked, nor entirely disengaged from matter, but carries away with her an integument from among those wherewith she was before invested. And I am far from being singular in this notion, for many wiser men have assigned a fine vehicle for the habitation of the spirit, after its being divested of flesh and blood; and the ancients generally painted the soul of Psyche with butterflies' wings, to represent

represent that she came out with a new body as a butterfly does from the Chrysalis: nor do I want the best established authority in my support, for the apostle Paul compares the body to a seed which rots and perishes in the ground, nevertheless a germ survives producing another plant bearing some resemblance to that which generated the seed.

2. But we must suppose this vehicle extremely small, so that the nicest eye may not discern it when going, nor the finest scales discover an abatement of weight in what remains after it is gone: yet it must contain an organization capable of exhibiting a greater variety of ideas than we now experience. No doubt it will appear strange and extravagant to the generality to imagine, that so many organs of sensation and reflection, and instruments of action, as a man possesses in his present condition, can ever be contained in a body so small as to be undiscoverable by the finest balance or the most piercing eye; for so must every thing appear that differs widely, whether in size or composition, from the objects we have been constantly conversant with. The young fellow, who has never been in a nursery since he left his own, the first time he sees a new born babe, is apt to wonder at its littleness: and if he dips into a treatise on the formation of

a fœtus, can scarce believe the lineaments of a human body could be comprised within so narrow a compass as he sees there described. Thus every further reduction of size gives a fresh shock to his imagination, until familiarized thereto by frequent contemplation; for things are no longer strange than while new to the thought. For which reason I was willing to prepare for my present subject in the third chapter of this volume, where I have endeavoured to put the reader upon reflecting on the great divisibility of matter, and to show that the least conceivable particle is capable of containing as great a variety of parts and machinery, as the whole human body. But what clogs our comprehension in these minute divisions is, that we commonly think of making them by dividing the whole without dividing the parts, which must certainly spoil the composition. If St. Paul's Church were cut in halves, each half would not be a church; if into quarters or lesser portions, they would still be more remote from the plan of the architect; but were all the stones, the timbers, the ornaments proportionably lessened, the whole form, disposition, and symmetry, might still remain the same, though reduced to the bigness of a nut-shell. This indeed is what the clumsy hand of man could never do, but nature is a finer

finer artificer than man, and I doubt not might succeed if she would undertake it. So if she were to waste away one half of a man from the head downward, without destroying his vital and animal functions, yet he would have but one arm and one leg, and must lose many of his powers: but if she lessened all his component parts, his bones, his muscles, his fibres, the globules of his blood and other juices in equal degree, he might still continue a man, how small soever reduced, with the same variety of powers and faculties as before. He could not indeed exercise them upon the same objects he used, but she wants not means of furnishing him with other materials, useless and unknown to him before, but suitable to the condition she has thrown him into. And it may be presumed he would be better able to manage them, his strength not decreasing in proportion to his size, because small bodies are more compact and solid than the larger made up of them, for composition always adds to the quantity of pore in the compound. A bushel of pease has less specific gravity than the single pease it contains, because there will be hollow spaces between each pea and its neighbours, besides the pores within their substances: and if a multitude of bushels be packed up in a room, there will be vacancies between

between them, besides those among their contents. Therefore the finer parts a body contains, the fewer atoms they must severally consist of (for these cannot be divided), the less of pore there will be among them, and consequently its nerves and sinews will be so much tougher and stronger.

3. And as the limbs and instruments of action in such a little body will be stronger with respect to the materials they have to deal with, so likewise must they be more agile and pliant: for this we find to be the case between animals of similar make, whose motions are commonly more unweildy in proportion to their largeness. A little horse shifts its legs quicker than a tall one; the vulture and the eagle cannot flutter their wings so fast as the sparrow; nor did you ever see a hornet crawl so nimbly along the table as a fly; and little men are generally the quickest in their motions. Imagine a race of giants as big as Hampstead-hill, placed on an earth which, with all its animals, fruits, corn, trees, and vegetables, should be proportionally vast: they might then have the same accommodations as we have, but could not find the same uses and convenience in them, by reason of the tediousness of their motions. Consider how long they must be at dinner; if they sat down at eight in the morning

morning they would scarce finish their repast by night, having a mile to carry every morsel from their plate to their mouths; when they went to bed, it must take an hour to get up stairs, and after having unbuttoned their coat, they must give their arm a swing of two or three miles round to pull down the sleeve behind; when they talked together it would require four or five seconds for their voices to reach one another's ears; and as it may be supposed their mental organs are conformable in size to their bodily, if you asked what is o'clock, it might be necessary to consider half an hour before they could think of the proper answer. In short, they must needs be a slow, solemn, and heavy generation, without any spark of wit or liveliness belonging to them. If one of us were migrated into their enormous hulks, should we not, think ye, wish ardently to get back again into our less than six-foot bodies? And by parity of reason it may be presumed, that when delivered from our present cumbersome bodies, if we remember any thing of our situation therein, we shall be as much rejoiced to find ourselves in a body proportionably less and proportionably more alert and vigorous, wherein we may dispatch as much business in a minute as we can now in an hour, and perhaps be able to read through Guicciardine in the time we are now

now poring over all the nothings in a four-columned newspaper. Nor do there want objections against the supposal of bodies equally large with those we possess: for besides that it may be asked, how comes it we never see them? if they are gross bodies, composed of flesh, blood, and bones, like ours, where shall they inhabit? They cannot live in the fields of ether, for they must have food to support them, solid ground to walk upon, an atmosphere to breathe and to keep their veins from bursting by its pressure, or to buoy them up if you should fancy them provided with wings. They cannot live under ground where no corn can grow, no pasture to feed their cattle, no light can reach them, and the air, if any, must be too dense for their respiration. In what other earths then will you dispose of them? for they will want more than one, considering the vast multitudes that have incorporated among them since Adam: what planets are there among those we know of, that will not either melt them to oil, or freeze them to statues? or could you find a commodious habitation, how would you get them thither without a miracle? But if you suppose them hollow skins, or mere surfaces, as vulgarly fancied of ghosts or apparitions, they can have no strength nor firmness in their limbs, no consistency of parts

to

to prevent their being torn in pieces by winds, no solidity to keep them steady from being blown about by every breeze of air, nor power of motion, being unable to overcome the resistance of whatever medium they may have to pass through. Therefore, when we reflect on the endless divisibility of matter, the extreme porosity of solids, the vast spaces lying between the particles of all fluids, it seems easier to comprehend our vehicles so sized as to slip between such corpuscles as are too bulky for them to cope with, rather than empty shawdows or gross composures of flesh and blood like ourselves.

4. I have hitherto spoken of the vehicles as little diminutive men with arms, legs, and so forth, such as we have; but I do not think so narrowly of nature as to pronounce with Epicurus, that she cannot form a reasonable creature unless in a human shape. It seems to me more agreeable to reason, at least more soothing to the imagination and better suited to our expectations, of exchanging this present mansion for a more commodious, to suppose them not made in the shape nor provided with the limbs of any animal whatever, but consiting all of muscle and fibre, tough and strong but extremely flexible and obedient to the Will, susceptible of any shape, and

and in every part capable of being cast into any member of any animal, of being made soft as a feather or hard as a bone. We have some few imperfect samples of this changeableness in our own composition: our tongue lies round and yielding in our mouths, yet we can thrust it out to a considerable length, make it push with some force or support a small weight hung upon it by a string. If a man not very fat sits resting his leg carelessly upon a stool, his calf will hang flabby like the handkerchief in your pocket, let him stand upright with a burden upon his shoulders as much as he can well bear, and you will find his calves hardened into very bones. We can open our hands into five moveable fingers for any nice or nimble work, or we can close them into a kind of hammer for striking, or bend them in rigid hooks for pulling. We have but one windpipe to sing, to talk, to whine, to rant, to scold with, nevertheless, we can cast this single instrument into as many various forms as there are voices and tones of voice we utter: whereas were it necessary to have a different pipe for every articulate sound, our throats must have been made bigger than a chamber organ. Thus we see how great advantage and convenience must accrue upon the members being convertible to many uses: and at the same time this may lessen our amazement

amazement at the multitude of powers we suppose comprised within so narrow a compass, for there may be more powers of action without requiring more works than we have in our present machinery; especially if the works be simpler, not consisting of a multitude of parts whose operation must be propogated from one to another, and all concur to perform every single action, whereby the variety of our motions must needs be greatly contracted. You may have a bell-handle hanging by your chimney side with which by means of strings and pulleys you may ring a bell at the other end of the house: but you can only jerk it towards you, and cannot give it so many shakes up and down, to and fro, quick and gentle, as if you held the bell itself in your hand. In like manner we act upon external bodies with gross members lying at an immense distance from the seat of our activity, requiring a long contrivance of strings and pulleys to give us any command of them; we move our limbs by their bones, the bones by tendons, the tendons by muscles, the muscles by nerves, and the nerves perhaps by a series of imperceptible fibres which no anatomy can investigate: whereas were the externals needful for our uses so sized as that we could apply our first fibres immediately to them, we might manage them

them a hundred times more handily, expeditiously, and cleverly.

5. And the same advantage, accruing from the great flexibility of fibres to cast themselves into the form of any limb occasionally as shall be wanted, may be extended likewise to the organs of sensation, which are only so many textures of network variously woven from similar threads. The retina of the eye, whereon all our visible objects are painted, takes its name from a net; the auditory nerves are represented to us by anatomists as expanded in a reticular form at the bottom of the ear; the like is told us of the olfactory nerves spread over the lamellæ composing the ossa spongiosa of the nose; of the gustatory papillæ of the tongue, and tactile papillæ of the fingers and all the rest of our body. Now if we had the power of changing the position of our threads, what should hinder but that we might cast them into any texture fitted to receive the vibrations exciting any sensation we pleased; so as to see, or hear, or smell, or taste, or feel with the same organ, according to the qualities of external objects striking upon it? Here I must beg indulgence from modern delicacy to allow me a childish experiment for explaining my idea: boys almost fit for school have an ingenious pla[illegible] they call cat's cradle; one ties the two ends

ends of a packthread together, and then winds it about his fingers, another with both hands takes it off perhaps in the shape of a gridiron, the first takes it from him again in another form, and so on alternately changing the packthread into a multitude of figures whose names I forget, it being so many years since I played at it myself. If then we should be enabled to erect the interior fibres of our little body like so many fingers, we might take off the exterior therewith, still shifting them from one set of fingers to another, sometimes in retinas, sometimes in auditory or olfactory expansions, or perhaps others capable of conveying new sensations whereof now we have no conception. Nor let it be objected that the retina cannot perform its office without an eye-ball consisting of cornea, uva, the three humours aqueous, chrystalline and vitreous, before it; nor the auditory nerve without an ear containing a meatus auditorius, a tympanum with its malleus, a cochlea and fenestra ovalis with its stapes: for these are only wonderful contrivances to gather the rays of light into pencils, or modulate the vibrations of air, that they may be compact and vigorous enough to affect our gross and dull organs; but the finer vehicular fibres may be so agile and sensible as to take an impulse from single corpuscles of whatever

ever shall serve them instead of lights and sounds, without needing a long process of refracting media or winding ducts to marshal numbers of them in a proper order for their reception.

6. Such little bodies likewise must be directly under the action of the mind in more of their parts, without needing the complicated machinery of strings or engines to propagate it to them: for the mind's immediate activity reaches no further than the sphere of her presence, which can never be enlarged, therefore the smaller body she inhabits, the greater proportion of it will fall within her presence and subject to her command. But the sphere of presence must be extremely minute because the bodies capable of containing it are found to be so, for nobody will doubt that every spirit vitally united to a corporeal organization is wholly surrounded and covered thereby. The great Boerhave assures us that the human fœtus was once no bigger than an ant, that the doctrine of animalcules is generally received among the moderns, that he has seen them himself, that his friend Leuwenhoek has demonstrated them to be ten thousand times, and believes them ten million times less than a grain of sand. Who then can doubt that this ant and this animalcule were our very selves, or that that living principle

principle, appearing to actuate the animalcule with great vigor and sprightliness, is the same perceptive individual which afterwards acts, and feels, and understands, in the full grown man? If we would seek for the place where this individual resides in our human composition, there seems no likelier method to find it than by tracing the channels of conveyance through which sensation is transmitted from external objects to our notice, for they, one would think, must all conduct to some one spot, which is the royal presence chamber, where their messages are ultimately delivered: but no investigations by dissections, by microscopes, and by ceraceous injections, have yet been able to discover this chamber, for they all lose their clue before they can be supposed to reach the mind herself. Those channels are now generally agreed to be the nerves, propagating the impulse of external objects to the brain, and others of them carry back from thence the voluntary motion by which we move our limbs. The same Boerhave tells us, they are innumerable in multitude, all conducting to the brain, whose medullary substance is made up of them: that each has its distinct office, for the optic nerve is not capable of conveying sound, nor the auditory of colours, and so of all the rest; therefore they must all have some communi-
cation

cation with the mind, for else we could not receive the variety of sensations we do by their ministry: that they all terminate in the two anterior ventricles of the cerebrum or brain, where their last operation is performed, and of whose arched surface they are the component parts; which surface he therefore calls the sensory, or place of our ideas. In section 574 of his lectures, he has these words: "The "spirits must have a free course [through "the nerves] from their origin in the brain, "from every point thereof, even to those "muscles which are under influence of the "Will. Hence follows, that the sensory is "a part of the brain, where all those points "are collected together. ——The sensorium "is that part of the body where the action "of all the sensitive nerves terminate, and "from thence the influence of the Will "first begins to operate upon certain mus- "cles. This common sensory seems to be "seated where the ultimate lymphatic arte- "ries unite with, and fill the beginnings of "the nerves with spirits through all the "ventricles and inequalities of the brain. "But the territories or limits of this sen- "sory seem to be very large and various, "so that each nerve has its particular part "where those ideas dwell, which are con- "veyed by the same: the ideas of odours

about

"about the termination of the olfactory "nerves, of colours about that of the optic "nerves, and of motion about the nerves sub- "servient to voluntary muscles, &c. It cannot "be in the pineal gland, for so many thou- "sand nerves can never take their origin from "so small a particle, but in the arched me- "dulla encompassing the cavity of the ven- "tricules." This cavity then we may take leave to entitle the palace of the mind, where she keeps her constant residence, but can with no propriety be styled the royal apart- ment, as being by much too large for her per- sonal occupancy: for that sphere of presence which once lay enclosed in the ant-like fœtus or diminutive animalcule, can never fill the whole circumference of so spacious a build- ing. Therefore there must necessarily be some connecting medium between, and from hence we may draw no feeble argument for the reality of our vehicle, whose imper- ceptible fibres we may reckon her domestic servants, who continually bring her the mes- sages they receive at the doors and windows of her palace from the medullary nerves, and carry back her orders to the like nerves for them to forward to the muscles. Thus the mind lies enveloped with two bodies, the inner, or vehicle, which I beg leave to style the Ethereal, not that I pretend to know it is

made of ether, but to distinguish it from the gross outer body, which I would call the Elementary, as being taken from the dust of the ground aptly mingled with the three other known elements of fire, air, and water.

7. We learn likewise from the above cited lectures, that the little animalcule gets into the ovum through the fresh wound of the calyx or stalk newly broken off from the ovary. If this animalcule has a slender elementary body (as it may be presumed no animal is without one) we may suppose it presently to dissolve, and the pieces discharged back again at the same aperture of the calyx, upon which the vehicle being left naked may adhere to the ovum in many points, which, as that grows and expands, are drawn out thereby into strings, until in process of time they take the form of a spider's web, stretching throughout the whole compass of Boerhave's sensory or arched vault of the ventricles in the brain. For that interior part of the ovum whereto the vehicle coalesces may be counted an incipient brain, because it is observable that the formation of all animals begins by a brain; from thence grow the cerebellum and spinal marrow, from them the heart, arteries, and bowels, then the muscles, tendons, gristles, and lastly, the bones. For all parts of an animal are nothing else than bundles of exceeding

ceeding fine threads or fibres, variously knit together; which in their loosest texture compose nerves, when a little more compact they form muscular flesh, glands, and membranes, as closer and closer bound they make tendons, sinews, vascular coats, cartilages, and when tightest become bones, in one of which, the os petrosum or rock-bone of the ear, they grow into a substance hard as steel. This web-like expansion of the ethereal strings being an unnatural state, it may be presumed that when upon death they get loose from the medullary fibres, they will contract into their main body, like the horns of a snail upon your touching them: but it is not impossible they may carry with them some particles from the grosser nerves whereto they had adhered, whereof may be formed another slender elementary body minuter than that which invested them before in the animalcule. It is easy to comprehend that the vehicle lying so long enclosed in the body wherewith it is connected, to whose action it must be perpetually subject, may receive some alteration in its make and texture therefrom; and thus every form of being it undergoes may affect its condition in the next. It will appear evident that the animalcular state has an influence upon the human, when we reflect how much children take after their fa-

thers, as well in their outward lineaments as in the temper of their minds: but the father contributes nothing more to the composition of his child than by furnishing the animalcule. Therefore there seems ground to imagine that the animalcule, differently constituted according to the humours of the body wherein it was bred, either moulds the little ethereal inhabitant enclosed in it variously; or when having nestled in the ovum, breaks in different places and so causes it to catch hold of different fibres thereof. From hence may be understood how the course of this life may naturally have an influence upon the next; for the vehicle may be differently affected according to the manner wherein it stands connected with the gross body, receiving some change of disposition from the deeds, and words, and thoughts passing during its conjunction therewith, more especially from the settled habits of acting and thinking practised therein. And since the laws of nature are all established in perfect wisdom, tending unerringly to good and holy purposes, it seems more than likely that vicious courses will endamage the little ethereal body; incrustating its fibres with terrene concretions so as to render them stiff and useless; or fixing too many and too gross elementary particles upon them, which when drawn into their main body, will prove grievous

grievous hindrances and painful disturbances there; or stretching them beyond their strength with the eagerness of sensual appetites, which will render them feeble like a strained sinew or flaccid like a paralytic muscle: whereas the practice of virtue will strengthen, supple, and mature them, and suffer no more elementary matter to adhere than will grow into an agile healthy body adapted and subservient to all their uses.

8. There is one stumbling block that may lie in the way of many against admitting the doctrine of animalcules, because for one that finds entance into an ovum there must be millions that perish: but let us consider that when they perish (as we call it) they are not annihilated, they are only cast into the same condition with every soul just then departed, that has lived fifty, or eighty, or a hundred years. For death levels all, not only the prince and the beggar but the frisking animalcule, the sleepy fœtus, the sucking child, the wanton schoolboy, the positive stripling, the state-mending citizen, the doating great-grandsire and the longevous antediluvian: all go into the same world and all partake in the same form of Being only with different constitutions according to the length and circumstances of the corporeal stages they have passed through. Which if it

it be a better world than ours, best fares it with him who can soonest get admittance into it: so that as before observed, it may be true what some ancient sages have affirmed, that the luckiest thing could have befallen a man was never to have been born. Nevertheless this ought not to lessen the due cares of our self-preservation, for life considered in itself is undoubtedly a blessing for which we have abundant reason to be thankful, and if it be a misfortune it is only comparatively so by detaining us from a happier state: yet even in this light we ought to value it as believing ourselves stationed here for some service accruing therefrom to the community whither we are going; and to resign it willingly upon summons, because that is an evidence that the necessary service is performed and we are called to receive the wages earned thereby. Therefore we cannot do better than follow Milton's advice, What thou liv'st, live well how long or short permit to heaven.

9. But small as these ethereal vehicles are we need not apprehend lest their slender bodies should be driven to and fro by storms, or tossed about in whirlwinds, for whoever pleases may imagine them conveyed by some law of nature to the fields of ether where all is calm and serene: or taking shelter in the pores of solid bodies as we do in our houses until the tempest

tempest is blown over. But these expedients are not requisite, for their own minuteness will preserve them against such like injuries. We are told by naturalists, the particles of air lie at a great distance in proportion to their bulk, so that there is room enough for them to pass on each side of those little bodies without touching, as we know the rays of light from innumerable stars cross one another in all directions without interfering: or if any one of them should happen to strike, it would do them no more hurt, considering their lightness, than a stone thrown against a feather hanging lose in the air.

10. Perhaps it may give disturbance to some folks to think of being reduced to such contemptible animals, tenderer than a worm and weaker than a flea: but let them consider that the strongest creatures upon earth are not the most favoured by nature; the mighty elephant, the vigorous horse, and the unwearied ox, are governed by man, and among our own species the most robust and athletic are generally of the lowest rank. If strength be desirable, why do our fine gentlemen throw away what they might have of it by intemperance, sloth, and effeminacy? But the strength of creatures need only be proportioned to their wants of it: what would the ant be better for the vigour of the horse,

or

or the polypus for the mighty sinews of the whale? those insects have force sufficient to carry in their provisions and draw in their prey, and more would only make them dangerous to one another. We in our present state have large works to do in providing for our sustenance, our clothing, our habitation, and accommodations of life, powerful enemies to cope with, and great beasts to employ in our services, all which we could not manage without a consistency of flesh and bones, and some competency of bodily strength: but the vehicular people have no such bulky wares to move about, such massive stones to heave, such beasts of prey to contend with, nor such beasts of burden to break to labour: therefore, though their strength be trifling in comparison with ours, it is greater in proportion to the objects they have to deal with, and sufficient to serve them in the employments and amusements suited to their station. Or if it were a little defective, they may supply their want of force by their greater sagacity and agility.

11. For their bodies contain nothing superfluous, nor that number of vessels concerned in our animal circulation, but consist chiefly of sensory and motory fibres; so that every part lies within the observation and under command of the mind. If any thing

thing insinuate into their composition which might create diseases, they can remove it as easily as we can wash the dirt off from our hands: their faculties are more piercing, their understandings better furnished with materials, and less liable to be overclouded than ours: and they can throw their vehicle occasionally into such form as to receive what kind of sensation they choose from external objects, so as to make it all eye or all ear, or some other sense we know nothing of, or a mixture of several. Nor need we fear, lest a multiplicity of ideas should perplex and confound them, for perceptions take up no room in the mind, nor does she ever find herself unable to receive as many as her organs can excite. Confusion springs from the darkness and imperfection of our ideas, not from an incapacity in the mind to perceive such as are presented clear and distinct. And as they are fitted for discerning minuter objects than we can distinguish, they will have an opportunity of observing the motions of those subtile fluids whereon gravitation, cohesion, magnetism, electricity, heat, explosion, vegetation, muscular motion, and sensation, depend, which will furnish them with sciences to us unknown. We find that light discovers to us the form and situation of bodies at an immense distance, and when we reflect how extremely

tremely moveable and elastic the ether is known to be, we may conclude that no single particle of gross matter can stir without affecting its vibrations to a prodigious distance: this then may answer their purposes better than light does ours, and inform them accurately of the positions, the distances, the magnitudes, the motions, of all the visible universe. By which means they will have a full display of nature before them, from the most magnificent of her works to the most curious and minute: nor can they fail of rising from thence to a compleater knowledge of the Author of Nature, his greatness, his wisdom, his goodness, than we can attain. And perhaps they may fathom that to us inscrutable mystery, the origin of evil, so as to reconcile it perfectly with their ideas of unlimited power and infinite goodness.

12. Nor can we deny them the means of discourse and correspondence with one another: ours we know is carried on by arbitrary signs, either of sounds or letters, and any other marks that might be exhibited with equal facility, variety, and distinctness, would do as well: therefore we cannot but suppose that such agile creatures, all nerve and sensory, may form characters upon their vehicle, or throw off little particles of the fluids surrounding them, or find twenty other ways

ways of communicating their thoughts. Nor can we deny them methods of transporting themselves from place to place, not in the manner we walk, by pushing our feet against the stable ground, but rather like the steerage of a ship, whose sails are set before or sidelong to the wind, receiving the direct or oblique impulse of the little streams passing continually on all sides of them, with such dexterous management as not to be thrown aside from their intended course. It would be in vain to conjecture what are their common employments and amusements, but enough has been suggested to show they do not want for either, and perhaps we may find more subjects to occupy their time than these: but amid the variety of objects and ideas continually presenting, it cannot be doubted there will be some of the agreeable and disagreeable kind, which will demand their care to procure the one and avoid the other, or to assist one another upon occasion, from whence will arise desires and aims, prudential maxims and rules of conduct, the one perpetually instigating their activity, the other directing their measures. And if the idea of evil be requisite to action, they will not want samples of actual suffering in some of their compatriots, who will come infirm and maimed into

into their world by reason of hurts received in ours.

13. But how much soever they abound in methods of business and enjoyment, sciences and accomplishments, we must imagine them totally dissimilar from those which occupy and entertain us here, for our ways of thinking and acting would neither be of use nor could be practised among them. What service could our knowledge of agriculture, of manufactures, of painting, of politics, of navigation, do them, or what materials could they find to exercise it upon! Where is there room for optics among those to whom the corpuscles of light are so gross as to be objects of touch rather than of sight? of mathematical lines and angles among bodies continually moving? of our virtues when the passions they restrain solicit no longer? of our moral theory, when human nature is exchanged for another? of our natural religion to those who may quickly strike out a better from the fuller display of nature lying before them? Nor are our mental acquisitions of a kind to be portable with us upon our departure hence; our first stock of materials is all thrown in by the senses, nor have we anything else but what is made up by working upon them: our abstractions have all some reference

reference to sensible objects of their motions or changes, or actions upon them. Our imagination we find connects with the animal machinery, and so does our memory, the foundation and repository of all our knowledge; for the images and traces in both appear stronger or fainter, or not at all, according to the temperature and disposition of the body, according to the stages of infancy, manhood, and old age; and that fatigue, that briskness or lowness of spirits, that earnestness or flushing of the face, that tremor of the nerves, brought upon the grosser part of our frame by our several courses of thinking, make it more than probable that not a thought stirs in the mind without some correspondent movement in the vital circulation. Therefore the springs employed in working all our various turns of thought being removed, we can expect to have no more of the same ideas return: and we shall be better without them, as they would be troublesome to us, by continually raising wants that could not be satisfied, and putting us upon methods of exerting our power that would not be feasible, as not having the same limbs nor instruments, nor materials nor objects, as are provided for us here.

14. We have shown in CHAP. VI. that percipience and rationality are secondary qualities, resulting from a composition of fine matter

matter curiously organized, together with a perceptive spirit vitally united thereto, and this spirit so circumstanced is what we understand in common discourse by the rational soul. For we are currently held to be born reasonable creatures, that is, capable of reason or having the rational faculty, for we do not attain the use and exercise of reason, until some years have passed over our heads, wherein experience has furnished us with materials to think and reason upon. So then this vehicle or inner sensory constituting us rational creatures we received before our birth: it continues with us during our lives, enabling us to perceive and understand the notices brought from external objects by our bodily organs, the traces lying in our memory and all those stores of knowledge contained in the repository of our ideas: it remains entire after dissolution of the body, and though it can neither think nor reason after losing all its former ideas and materials to work upon, yet retains its rationality and cogitative faculty ready to be exercised upon whatever objects a fresh set of senses shall throw in or new experience supply. Nor let it be objected that I make the memory one of those parts that shall be left behind, so that the naked soul how quick soever its perceptions may be; will have no retention; for though I have

have supposed the vehicle almost all nerve and fibre, it may contain a small mixture of other parts capable of working into traces, or those parts which are kept soft by their present covering may harden upon being more exposed and become stiff enough to retain impressions, or new particles adhering from without may form a membrane fitted for the like purpose. But without troubling ourselves to conjecture the particular manner, we may depend upon that wisdom, by which all the laws of nature are established, to provide means of exercising so necessary a faculty without which there can be neither understanding nor reason, neither prudence nor judgment. Thus we may conclude that the soul will be born into another life as much a blank paper as ever she came into this, having all the characters formerly written upon her totally expunged but capable of receiving any new ones that shall be written from thence forward. And though we shall not be wholly disengaged from matter, it will be of a very different frame and texture from our present: for we are told there is a carnal body and there is a spiritual body, and that what grows from the seed is not that body which was sown, but God giveth it another body. And this he gives, not with his own hand, but by the stated

laws of nature and instrumentality of second causes.

15. But this vehicle, lying so long enclosed in the human body, cannot fail of receiving some little changes in its texture from the continual play of our sensitive organs and action of our animal circulation thereupon: for every sensation and every suggestion from our memory or reflection passes through that in its way to the mind, and though each singly may affect it no longer than for the moment of its passage, yet by being frequently repeated they will work a durable effect. Just as if you press your nail upon the back of your hand, the flesh will return to its smoothness as soon as you take it off, but if you do this for hours together every day, the skin will part asunder and leave a dent between. The variety of our ideas can be owing to nothing else than the various figures or modifications of the organs exhibiting them, and as they act upon the sensory, this during their action must correspond with those modifications; so that every time a man sees a colour his sensory takes one modification, when he hears a sound another, when he meets with something to make him laugh another, when he meditates seriously another, so when he is angry, affrighted, afflicted, or joyful, every affection gives a different disposition to his sensory.

And

And as we have each of us particular courses of thinking, wherein we are led to travel more frequently than in any others by our several habits, our passions, our desires, our education, our situation in life, and the objects most familiar to our senses, the ideas passing almost continually in the same track will work the tender sensory thinner in some places, and leave it thicker in others, separate the fibres or drive them closer together, stretch or contract them, and cause various alterations in their condition and texture. So that every man goes out of the world with a differently modeled vehicle, according as he has been a soldier or a scholar, a merchant or a mechanic, a gentleman or a labourer; according to the pursuits and expectations that have taken up his thoughts, the successes and disappointments, the joys and afflictions, that have hung upon his mind, the occupations and amusements that have filled up his time.

16. Nobody can help observing how much the condition and tenor of our lives depends upon the constitution we bring into the world with us, upon the strength and health of our body, the sagacity and natural talents of our mind; and we must acknowledge these affected by what passes in the womb: it is there the eyes and ears, the legs and hands, the lungs, the instruments of speech, the

tablet of the memory, the organs of reflection, are formed, all which are of no use to the fœtus but of necessary use to the living man. Nor can we well avoid concluding from the similitude discoverable in the ways of nature, that we carry about within us a little fœtus continually forming and fashioning by the gross body wherein it lies enclosed; that according to the nourishment and action received therefrom will be its future lineaments and character, constitution and quickness of parts; and that as men are said to be born here poets or painters, politicians, mathematicians, navigators, or mechanics, so they will be born hereafter with talents fitted for particular acquisitions and employments. Neither must we imagine the forming fœtus uninfluenced by our manner of conduct in our several professions and stations: the practice of virtue invigorates and supples the little limbs, strengthens the senses, quickens the faculties, improves that small mixture of unfibrous matter which may serve as an integument or instrument for the uses of the soul. Whereas vice debilitates, distorts, overclouds, and benums the soul, and fixes too much of the terrene concretion so as to disturb the operations of the nobler parts. As opposition is not my favourite passion, I shall not dispute that punishment may be inflicted by the immediate

mediate hand of Heaven, or the ministry of devils employed to torment those who are judged objects of the divine wrath: but I think the same purposes may as well be answered by supposing misery the natural consequence of wickedness. For who but God holds the reins of nature in his hand, establishes her laws and ordains her courses? so that whatever they bring forth is as much his doing as what is done by other instruments: nor is there the less discouragement to sin if evil follow inevitably upon it, whether this be brought about by the operation of necessary or voluntary agents. But that a mighty weight of suffering may be thrown on in the way I have assigned, we may easily comprehend when we reflect on the miserable condition of those wretches who are born into this world, diseased, maimed, and imperfect, and how small a quantity of foreign matter in our bodily frame causes great inconveniences and disturbances. A grain or two of sand gives racking pain in the kindeys, and a much less concretion of terrene particles is likely to give acuter anguish in the more sensible vehicle: a drop of rheum in our joints, disables us from using them, and the like obstruction in a finer body would render it incapable of helping itself against impending dangers, so that it might incessantly be rapt in whirlwinds or buf-

fetted about by the agitations of fire for want of power to extricate itself: a little thickness of blood in our brain fixes an incurable madness, and a similar foulness in the naked sensory might overwhelm the soul with perpetual delusion and perplexity, tormenting fears and jealousies, intolerable horror and despair.

17. Thus we work out our future fortunes by our present behaviour, and fit ourselves unknowingly for the several parts we are to act upon the next stage by practising those assigned us in this: so that we may look upon life as a necessary preparation to qualify us for the employments of another state. And when I consider the vast variety of engagements and amusements among mankind, the very different characters and employments of the several nations upon earth, the many unavailing hours passing over our heads, the great loss of time in sleep, all which cannot be accounted for from their uses here, I should regard this conclusion as more than hypothetical if it were not for one objection occurring, which is, the multitudes of human souls passing directly into another state without touching upon this, and so capable of receiving no preparation thereby. From this observation we may gather that the rational soul is compleatly formed in all its essential parts before entrance into the human body,

body, and that the fashion and lineaments it afterwards takes by long habitation therein are not necessary for its subsistence in the vehicular state, but preparations fitting it for some particular functions useful or convenient there. Perhaps the arts and sciences, the rules of public and private conduct, may be struck out or quicker attained by souls who go thus prepared, and the others may enter into their new life in a state of infancy similar to that they would have been born in here. I know we reckon children more docible than grown persons, but then it is of such childish instructions as are forgotten again afterwards and serve only to give the mind a firmness for the reception of more solid knowledge. But those who want this preparatory firmness acquired by the exercise of their faculties upon earth will have a singular advantage in another respect, for they will be free from that terrene concretion and remains of the carnal part bringing on the inconveniences, disabilities, pains, and mental disorders, spoken of in the last section; and as they can do nothing to improve their future condition so neither can they do any thing to hurt or incommode it.

18. And if the next life begins for the most part like the present in tender infancy, this will require the care of the old inhabitants

to

to overlook and cherish it: so that the business of nurture, education, and parental fondness, will be no less considerable sources of employment and amusement among them than among us. For there being neither marriage nor generation in that country, they will provide themselves families by a kind of adoption out of the new comers continually flocking in upon them. Nor will they want means to direct them in their choice: for though we have denied them all remembrance of what passed during their abode here, there are other ways of discovering former relations and connections beside that of inspecting the traces in our memory. If it were not so common among us we should be astonished to think how a man, by looking upon a few scratches upon paper, according to the shapes in which they are drawn shall come to the knowledge of what his senses and his experience could not have informed him. By this way my friend at a hundred miles distance may know where I was yesterday, what I was doing, and what I thought of in my most retired meditations: and by this way we know what was done two thousand years ago in the days of Hannibal and Scipio. But though this be accomplished by the consent of mankind affixing certain ideas to certain characters, let us consider whether the

the like intelligible writing may not be exhibited by nature in the dependence of effects upon their causes; so that disembodied souls, having acuter faculties than ours, and improved them by long application and exercise, may acquire a dexterity at investigating causes from their effects, know precisely what has happened from what they see happening, discover their own pre-existence, trace out all that has befallen them in their former state, become acquainted with the history of mankind, learn by the manner and condition wherein the new comers arrive from what parts they must come, and discern from a resemblance of features that the same causes must have operated upon them which have affected themselves. By these marks they may find out a wife, a child, a brother,, a friend, a neighbour, a compatriot, and what is more than we could do with our remembrance, may distinguish their descendants who never came to the birth or were snatched away from their cradle. The endearments arising from these discoveries must double their diligence in the tendency of those who come helpless, and relief of those who come contaminated with such impure mixtures of their former composition as can possibly be removed. Nor if particular inducements were wanting, would they want the spur of general benevolence to the na-

tion !

tional species which is ever more glowing in proportion to the clearness of judgment and extensiveness of understanding.

19. Upon this view of the two worlds it appears there is a mutual connection of interests between them: for we are interested in what befals us here, not only as it effects our present condition, but our constitution and talents hereafter; and likewise with what befals other people in distant corners of the earth, with whom, though we have no dealings now, we are likely to have in time to come. And the people of the invisible world have an interest in all that happens among us, as it tends to form the genius, abilities, and characters, wanted for future services among them. Nor yet need we fear their interfering in our affairs, for their forces are too small to set masses of matter in motion capable of affecting any of our senses: or were they able they have something else to do than amuse us with idle dreams or terrify us with ghastly apparitions: neither can we suppose them so imprudent as to disturb the courses of nature and fortune, which they must be sensible are wisely provided with regard to the benefit of their own community.

20. For that a community they have we cannot well doubt when we reflect on the variety of dispositions wherein we quit our present

present mansion to take up our abode in theirs. For if we were to live single and apart from each other one kind of preparation would serve us all, but the great difference among us in our manner of living and dying indicates a like difference of occupation in the country whereto we are going: and as a nation cannot subsist here without a variety of professions to supply the wants and conveniencies of the whole, so there will be a public interest there to be served by members variously qualified, contributing their several parts to the general emolument, For where one individual wants what another can supply, this will naturally lead them to seek each other's assistance, and unite them into a regular society.

21. But though the rational soul or vehicle survive the body, we cannot conclude from thence that it will live for ever: on the contrary, the numbers daily pouring in from hence upon the next world, seem to require a proportionable drain somewhere or other, for else the country might be overstocked; but where to dispose of their superfluous members is the question. Some have supposed the soul to migrate to and fro between the two worlds, and that after passing some ages in the other, it shall return back into a fresh body, and so be born again, as at first, in the usual manner of generation. But this notion prevailed

vailed no longer than while the thoughts of men were narrow, while this globe of earth, with the atmosphere surrounding it, was esteemed the whole of nature, while the most enlarged understandings could conceive the sun and moon as little bigger than Peloponesus, and the stars as fiery meteors rolling round the upper regions of air: so that the soul could never soar above the reach of terrene exalations, which adhering and gathering round it, might weigh it down again to the earth from whence it rose. And perhaps after all, the doctrine of transmigration was never seriously held by those who taught it, but employed only as an hypothesis, to make the future advantages of a virtuous life more intelligible and striking to such as could conceive no other enjoyment or suffering than what may be conveyed through bodily organs. Nor is it likely the soul should return again to her former confinement, for we see every thing that has life grows therein, animals as well as plants, and whatever lay enclosed in integuments, bursts forth too large to be contained in them any more: the little silk-worm, just crawled from its egg, or the moth from her chrysalis, could not creep into them again, nor could any art replace the seeds of vegetables in their husks. But if the vehicle be not sustained by nutriment, which might increase

crease its growth, nor swell instantly upon coming out of its case, nevertheless it may gradually expand by the continual action of the spirit within, so as to be no more capable of lying within its former receptacle, than a man is of re-entering his mother's womb. And this expansion cannot fail of introducing stages into the vehicular life similar to those of youth, maturity, and age; the last not indeed attended with the pains and infirmities accompanying it here, but distending and separating the fibres of the vehicle, until at last they open and let loose the enclosed spirit, which will then fly off naked and alone. But though the spirit, no longer vitally united to any corporeal particles, either ethereal or elementary, which used to serve for a conveyance of ideas and instrument of volition, must lose its rationality, percipience, and active powers, it will retain its two primary faculties of perceptivity and activity: and whoever admits the doctrine of final causes, and nothing made in vain, can hardly suppose they can lie overwhelmed in eternal sleep, or that means shall ever be wanting of exercising them. But what means of perceiving and acting we can imagine supplied to pure spirit, totally disengaged from matter, and divested of all organization whatever, we shall reserve for the subject of the ensuing chapter.

CHAP. XXII.

MUNDANE SOUL.

WHEN I consider Bishop Berkley's notion of the non-existence of all bodies, and that the appearances they seem to exhibit are only perceptions raised in our imagination by the Divine power, I cannot help wondering that he did not go on to deny the existence of all spirits too; for we have no better evidence of the latter than of the former. How know I there are any other persons in the world, unless by seeing them before me or hearing them speak? and if they have no real bodies, nor there be any real air, whose vibrations bring the sound of their discourses to mine ears, what reason have I to believe there are any real Beings, whose action occasions the motions of those bodies, or that air, which are purely imaginary? So that if when I see the sun rise in the morning, ascend to the meridian, and set again in the evening, trees buffetted about by winds, or rivers rolling along their foamy waves, the whole be nothing else than a succession of ideas in my own mind: by the same rule, when I behold my friend enter the room, and hear him talk to

to me of various subjects, perhaps I am alone all the while; and what I take for the sound of his voice is nothing else than a like succession of perceptions excited in me by the same power that excited those of the sun, the trees, and the rivers, before mentioned. From hence it will follow, that possibly there may be no more than two Beings in nature, God and myself. Thus, if we give way to the suggestions of a lively fancy, and think ourselves warranted to take any thing for certain the contrary whereof cannot be mathematically demonstrated, we shall never know where to stop. But as these notions are apt to hang upon the minds of the speculative, I know of no better receipt to cure ourselves entirely of them, than by setting up opposite notions equally possible, and equally incapable of being demonstratively disproved. If it cannot be made appear with absolute certainty that there is that multitude of objects existing without us, which we daily see and handle, neither can it be made appear with the like certainty that there are not multitudes of sentient Beings in the composition of every man. We know so little the nature of spirits, that we cannot tell how a number of them, lying contiguous together, without any bars of flesh intervening, would affect one another: perhaps a perception raised in any one of them, by some

particle

particle of matter, would run instantly through them all quicker than fire does among the grains of gunpowder. If this be the case, for ought we know, there may be many spirits contained in one sensory: nor is there any need the corporeal organs should operate upon them all, for whatever sensations, judgments, or ideas, are exhibited to each of them, will immediately be apprehended by the whole number. I have shown in CHAP. v. §. 9. that every time we look upon a chess-board covered with double sets of men, we have at least sixty-four particles of matter operating upon us at once, and considering how many corpuscles of light are requisite to give the sight of every single piece; if I had said sixty-four thousand I had been likely to come nearer the mark: now if there be the like number of spirits in the human soul, each may receive the action of one particle, and yet, their perceptions being communicated, every one will have a distinct sight of the whole chess-board. Thus, instead of being the sole inhabitant of the universe, as I might persuade myself upon Berkley's principles, I shall not be the sole inhabitant of my own pericranium, but one member only of a most numerous family lodged there.

Nor let it be objected that it is much I should know nothing of my fellow lodgers, if there were such multitudes of us together in

in one chamber; for I know nothing of those inner ends of my organs which impress sensations upon me: besides, that receiving on other perceptions from my companions than they first received from matter, I have no mark whereby to distinguish them therefrom. Neither can it be urged that there would often arise an opposition among us, some would be for walking while others chose to sit still, some would want to stretch out the hands while others had rather keep them folded in the bosom: for if there be a variance of opinions in all numerous assemblies of mankind, it arises from their having their several views, designs, and judgments, and seeing things in different lights; but we coparceners of the same sensory should constantly have the same ideas, the same appearances, the same motives, exhibited to us, and discern satisfaction resting upon the same point. When our stomach grew empty, we should all at the same instant feel its cravings; if a well-spread table were set before us, we should all be guided by the same palate to stretch out our hands towards the same dish: and thus we should proceed in all our measures with such perfect conformity, that each would think himself the sole author of our actions, and our every motion appear to by-standers as actuated by one agent. It is pity somebody did not hit upon this

this thought, at the time when disputes ran high upon original sin: he must certainly have made his fortune by it, and perhaps risen to be a cardinal, for he might have demonstrated (as a little matter will amount to demonstration on the right side) that the spirits of all men were contained in Adam's pericranium, and of all women in that of Eve, and so were actual partakers of their transgression; which would have overthrown the objection of infidels against the punishment of descendants for the sin of their primogenitors. But as such a notion now-a-days is not likely to raise one to preferment, I may even reject it as an idle fancy, fit only to be opposed against the no less idle fancy of Berkley's, that all about us is nothing but idea and delusion. Nevertheless, I have received this benefit from letting my thoughts roam a little upon it, that the communication of perceptions among spirits, whereby many of them may discern ideas exhibited by one sensory, has furnished me with a hint for understanding that old notion of a Soul of the world, in such manner as to make it a fit receptacle wherein those who depart from the vehicular state may be absorbed. I shall now pursue my ideas upon that subject, not barely as a commentator, expounding what has been said aforetime, but taking the liberty to new model it in some few particulars.

ticulars, which I think may render it more intelligible and answerable to our present purpose.

2. The doctrine of a Soul of the World, otherwise called the Mundane or Universal Soul, must be acknowledged of very ancient date, as old at least as the Ionic philosophy; and seems to have been generally embraced by the most eminent sages of antiquity. They held it eternal, immutable, compleatly wise and happy, extended throughout the universe, penetrating and invigorating all things, the maker of the world and all creatures therein, the fountain of sense, life, and motion, from whence the souls of men and animals were discerped, and, after dissolution of their bodies, absorbed thereinto again; and they gave it the appellation of God. Their calling it by this name has made it generally believed that they meant thereby the Supreme Being: so Pope understood them when he talked of one stupendous Whole, whose body nature is, and God the soul; so likewise many of their followers understood them, which gave occasion to those pompous expressions of the human soul being a ray of the Divinity, an efflux or emanation from the substance of God himself: expressions which have no other foundation than in human vanity and arrogance. The doctrine thus inter-

preted became liable to just objections; as that it made God to consist of parts, some of which might be discerped from him, and that the Divine substance, being cloathed in body, might become imperfect, passive, weak, ignorant, susceptible of error, sin, pain, and misery.

3. But I apprehend the mundane soul originally was not intended to be understood of the Supreme Being, but a created God dependent on him for its existence and faculties, produced from everlasting by his almighty power and good pleasure: and though it was supposed the maker, it was not supposed the Creator of all things, but to have formed the world out of pre-existent materials according to a plan assigned it. The ancients, even those who held the unity of the First Cause, did not, like us, appropriate the term God to him alone, but applied it to other Beings of an order and intelligence superior to man. Seneca speaks of the Sun, the Moon, and the Planets, as Gods, and I suppose he would have called the four elements so too, for he ascribes sense and understanding to them; yet he acknowledges one supreme God over all, whom he styles the Rector of the universe: and we read in our bibles that there be Gods many and Lords many. Therefore when we find the ancients talking of God, we must not

not always take them in that restrained sense wherein we now use the word: and that it is not to be so restrained, when applied to the mundane soul, may appear from the Timæus of Plato.

4. By this exposition we escape the objections afore mentioned, for the human souls being now no longer thought parts of the Divine substance, may be supposed capable of pain and weakness without the absurdity following upon the former construction. Yet there still remains another objection arising from the individuality of the mundane soul, which we find spoken of, as one entire thing, one Mind, and therefore cannot, like compound bodies, consist of distinguishable and separable parts to be discerped from it. Besides that this doctrine seems to confound and destroy the distinction and personality of particular souls, for they were not created upon their discerption, the substance of them being already existent in the universal soul, but before any of them were discerped, there was but one created mind in nature, therefore they were then the same person with that mind and consequently with one another: yet upon their immersion into matter we see they are distinct persons and things, one doing and perceiving what the others do not and perceive not: again, upon their separation

from body they will lose their personality and distinction, being absorbed and resolved into their original principle. The ancients perhaps did not think themselves affected by this objection, having no correcter notions of individuality and substantial identity than our modern vulgar, who imagine that even bodies may impart something from their substance without diminution of the mass from whence it issued, if they perceive no visible alteration therein. Thus the vapours rising from the sea, were part of its substance and drawn up therefrom, but when formed into clouds we deem them distinct substances, nevertheless we consider the sea as remaining always the same body of waters notwithstanding the vast quantities continually exhaled by the Sun. In like manner the rivers seem to have a being of their own no longer than while running in their channels, for when intermingled with the sea, we look upon them as lost and swallowed up in that, which nevertheless we apprehend to be the same substance it was before their influx.

5. But it has been observed in the beginning of this volume that compounds are creatures of the imagination, nature making all things by individuals, therefore compounds having an ideal existence only may well pre-

serve

serve their identity notwithstanding an increase of diminution or change of their component parts, provided those changes be made imperceptibly, and do not work any change of appearance in the whole. Thus the Thames is always esteemed the same river, because we always see waters running between the same banks, although the waters running to-day are not the same that run there yesterday: and if in a summer's evening we see a mist rise up out of the Thames, the mist exhibits a new idea we did not discern before, therefore we conceive it a new Being produced from the substance of the river, which yet we suppose remaining the same without diminution because we do not find it abated in its fulness. So likewise if we throw a handfull of salt into the river, we lose the appearance of salt we had before, and apprehend it destroyed by being diffused among the substance of the water. But when we turn our thoughts upon individuals, the only real existences in nature, we cannot reconcile them to any transmutation of substance or production of one thing out of another. We have made appear in CHAP. III. that there are atoms actually, if not potentially, indivisible, and each of them, however disposed of, or wherever placed, whether in a drop of rain, in a river, or in the sea, must always continue identically

identically the same, numerically distinct from all others how closely soever united to them, or how indiscriminately soever mingled among them. And with respect to spirits, the case is stronger, for they have a personality annexed from which they cannot be divested without losing their existence. I have been a child and am now a man; I have been in joys and in troubles; I may imagine myself transformed into a lion, a sheep, or on ostrich, inhabiting the vehicular state, or wholly disengaged from matter and mingled among similar spirits: yet in all these changes I should still continue to be myself, for from the moment I began to exist I must have been myself, and must remain so until I cease to be at all. Nor is it possible to understand that what was once another person should become me, or I should become or be contained in another person: that there could ever have been perceptions in this substance which is me without my perceiving them, or actions performed thereby which I did not do.

6. Now without troubling ourselves to conjecture how the ancients would have removed this objection, or resolving to understand their theory in all parts precisely as they did, let us endeavour to explain in a manner conformable to our ideas, whether discordant

cordant from theirs or no. And in this view I shall lay down that the mundane soul is one no otherwise than as the sea is one, by a similitude and contiguity of parts, being composed of an innumerable host of distinct spirits as that is of aqueous particles: and as the rivers continually discharge into the sea, so the vehicular people upon the disruption of their vehicles discharge and incorporate into that ocean of spirits making the mundane soul. As for the discerption of souls from thence to inhabit human bodies I have no concern with that, the doctrine of pre-existence being now universally exploded: for every good woman knows for certain that we were created some little time before our birth, for this plain reason, because if we had existed a hundred years before, some or other of us to be sure must have remembered what passed with us in our former state. And since many learned divines admit an intermediate state between death and the final consummation of all things, I hope that what has been offered in the last chapter concerning the vehicular people will not be counted heterodox. Nor let it be objected that the mundane soul, already full and not having a proportionable discharge, cannot contain the fresh supplies continually poured in upon it: for some have supposed that the fallen angels have

have actually occasioned a considerable discharge therefrom. Or if this will not satisfy, let us consider that since creation is currently esteemed so common as to be practised every day in furnishing souls for children in the womb, we may as well suppose the same creative power constantly employed in producing new spaces, extending the bounds of the universe, and giving room for the mundane soul to expand according to the new members it continually receives.

7. We have found reason to conclude in the course of this work, that all created spirit, as well as all matter, is homogeneous, and as bodies receive their difference and secondary qualities from the various forms and combinations whereinto the similar atoms composing them are thrown, so spirits derive their characters, their percipience, their rationality, their powers and faculties, from the organizations whereto they are united, or means of conveying perceptions supplied them: so that the spirit of an angel, a politician, a shoe-cleaner, an ideot, a man, and a child, are intrinsically the same, differing only in their being variously lodged and circumstanced. From hence it follows that the spirits composing the universal soul are all of similar nature, having the same capacities, the same primary properties of perceptivity and activity, and altogether

altogether such as ourselves, except these bonds of flesh wherein we lie imprisoned. But since we receive all our perceptions from our corporeal organization, and have no other sensations than what come to us through the windows of our prison, it remains to enquire what sensations or reflections they can have after being disunited from all material composition whatsoever. As we live here separate and alone, each immured within his several cell, we have nothing to discern besides the modifications of the organe in our sensory, nor can we converse together unless by the intervention of some bodily medium, as of sounds or letters; but if we could have immediate intercourse with one another, who can say how much more expeditely, easily, and clearly, we might carry on our conversations? Suppose any two of us could thrust out that centre of our ethereal cobweb, which is the royal apartment or presence chamber of the mind, through the pores of our cranium quite to the outside of our head, without hurting ourselves or cutting off its communication with the bodily senses, and then laying our two heads together could, by opening some door of the said chamber, bring our spirits into immediate contiguity with one another, who can tell what would ensue? Perhaps whatever either of us saw or heard or apprehended

hended, by any of our senses, or rose up in our imagination, might instantly be discerned by the other. Perhaps this might not be a necessary consequence, but the effect of choice, for both being possessed of volition, we might select what perceptions we thought proper to impart, and keep the others to ourselves; as in conversation a man is not obliged to utter all he knows, but selects such of his thoughts as he judges worth hearing by the company: so that if I were eating apple-pye and cheese, and knew my companion had an aversion to the latter, I should communicate the one taste but suppress the other. We will now if you please draw in our ethereal web again for fear of its catching cold, and suppose one of us intending to partake in the diversions of Scarborough while the other stays in London: as soon as he is gotten there, we will suppose a string of spirits reaching from him to me. As they are mighty little folks, and perhaps penetrable by body, they can easily insinuate themselves into our presence-chamber without our feeling them, so that one end of the string might lie in contact with his perceptive part and the other with mine. Having this channel of conveyance ready at hand, we should despise the tedious method of correspondence by the post, wherein we might sometimes be misapprehended or imperfectly understood,

understood, or at best could give but a partial account of what had happened to us: for our intermediate friends in the line of communication might transmit all that either of us saw or heard in either place, together with our judgments and observations thereupon, with a precision, clearness, and vigour, equal to that wherewith we discerned them ourselves. Imagine further that we had a friend at Plymouth, another at Paris, another at Amsterdam, and that there were the like spiritual strings of communication from every one to every one: we should then all five have immediate knowledge of all that was worth knowing in the five places, by perceptions continually transmitted along those conveyances.

8. I will not undertake to prove, logically, that perceptions may be thus imparted from spirit to spirit, when all corporeal obstacles are removed from between them, having no positive evidence, that I remember, within the compass of my experience, whereon to build an argument, nor ever conversed with another person, unless by the usual means of discourse or writing, or significant looks and gestures; but on the other hand it would be a bold undertaking for any to prove the contrary, for I suppose nobody remembers his having ever been in contiguity with other spirits, and attempted

tempted an intercourse of perceptions but without affect. Therefore in a matter so uncertain I may lawfully take the privilege annexed to an hypothesis and assume the affirmative. Having laid down this basis I must proceed to one assumption more, wherein I am as safe against confutation as I was in the former, and this is that all space not occupied by matter is replete with spiritual substance called the mundane soul, each part whereof, that is, each component spirit lies contiguous to others: so that there runs a continuity throughout the whole as there does throughout the waters of the ocean; for lines might be drawn from any drop in the Atlantic sea to every spot in the European, African, or American shores surrounding it, which should pass over rows of drops contiguous to one another. This being premised it will follow that by the mutual communication of perceptions every one may have those arising in every other. But though I have assumed a power of imparting perceptions I cannot assume that of making them, for this would be running counter to experience. We cannot impart more knowledge than we have first ourselves, nor can the mind call up a single thought without employing some instrument to introduce it: for in all perception we are purely passive, receiving such from time to time as the modifications

fications of our organs excite in us. Since then such is the nature of our minds we must conclude that all perception must begin by the action of matter, how much soever it may be carried on by a spiritual substance: and as although a man may come to the knowledge of transactions he never saw by information from other people, yet somebody must have been present at the transactions to begin the relation; so neither can the mundane soul perceive any thing without an object exhibited to some of its parts. But this need make no difficulty, for when we consider how the stars with their several systems of planets are dispersed up and down, how light, ether, and perhaps many other subtile fluids we know nothing of, are diffused every where, and that all these bodies, great and small, must lie contiguous to some parts of the mundane soul, we shall see there will not want objects for it to perceive. And as our sensations, reflections and judgments, are impressed upon us by the configuration or motion of the particles in our sensory, so the variety of bodies floating about in the mundane soul may exhibit a greater variety of ideas thereto, whereby it may discern them all, their combinations and modifications, together with the comparisons and other relations resulting therefrom.

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9. If we suppose every component spirit to perceive all that every other does, it will appear impossible that so vast an infinitude of knowledge can be contained in any created mind; and we find a multitude of objects, although distinct in themselves, confounds us merely by their number; but this is owing to the scantiness of our organs, for according as they are more copious in one person than another, we find the same number of ideas appear clear or confused. Cæsar could dictate to three amanuenses at once, and call all the Roman citizens by their names; and if it would perplex any of us to attempt the like, it is because we have not the same quickness of parts, that is, the same fineness of organization. When we have so many visible objects before us that we could not admit another without confusion, we may still apprehend a sound or idea from any other sense distinctly. So that in our present condition, it is our organs that set the limits to our understanding, nor do we know what our mental capacity is, our sources being too scanty ever to fill the vessel. We may possibly be capable of twenty senses, but being provided with inlets only for five, have no more conception of the others than a blind man has of light. Therefore we have no reason to confine the extent of the mundane understanding to the narrowness of our own, but

but rather to believe it much larger than any thing we have experienced or can imagine. Nevertheless, large as it is, we have no need to suppose it infinite, or that the objects discerned by every part are communicated to every other, for this communication being not a necessary but voluntary act, each spirit may impart such perceptions to his neighbour as he knows will be of use or entertainment to him, suppressing the rest: and thus every one having all the knowledge he wants or can be serviceable, may be styled compleatly knowing, although he does not absolutely know every thing. Thus the parts of the universal soul will serve for organs to each other, conveying perceptions instantaneously from the most distant regions of nature, distributing to every one whatever information it concerns him to receive: for we know of nothing so quick as thought, nor that it takes up any time in its progress. And their knowledge being derived from one common fund, they will all have the same sentiments, the same motives and rules of conduct: not that I imagine they will all have the same parts to act, for these must vary according to their several situations, and the bodies falling within the sphere of their activity, but they will contribute their respective shares in perfect concert and unanimity towards carrying on

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one general plan. For we are not to think they have nothing else to do than transmit perceptions to and fro: but since we ourselves have a power of giving motion to our limbs, we may allow them the exercise of the like power, although they have no limbs to move, for the bodies dispersed among them may serve for subjects of their activity instead of limbs.

10. Now in order to find what work there may be for them to do, let us cast our eye upon two known laws of matter, Gravitation and Cohesion. Sir Isaac Newton, who best understood them, declares that they are not inherent properties of matter, but effects of some external force, which he supposes to be the repulsion of ether, acting by different rules in the production of either. This ether, he tells us, is more dense, and consequently more elastic, in proportion to the distance whereat it lies from any gross body: therefore the ether on the most distant sides of any two bodies being stronger than that lying between them, drives them together, and so causes their gravitation, and makes them seem to attract one another. Therefore weight is made by the differential, not the absolute pressure of ether; for this, like all other elastic fluids, expands equally on all sides, pressing upwards as well as downwards: so that the ether beneath whatever we have put into a scale heaves

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it up, but the ether above, being a little further from the earth, impels it more forcibly downwards. Wherefore the weight we find it have, measures to us the excess of force wherewith one ether surpasses the other, but discovers nothing of the precise force belonging to either. It may seem astonishing that so small a difference of distance from the earth, as between the upper and under side of a common leaden weight in the grocer's shop, should increase the density of ether in so sensible a degree as that it may be felt by taking the lead into one's hand: but since there are many astonishing things in nature, we will make no objection of this, but try to form some notion of what the absolute force of ether must be. If we could make an ether-pump, as we do air-pumps, we might ascertain by experiment what is the pressure on all sides of an exhausted receiver; but this being impossible, let us seek for some expedient to supply the place of it as well as we can: and though I am afraid we shall find none that will enable us to make an exact computation of the strength of ether, we may hit upon such as shall convince us it must be exceeding great. If we toss a guinea upon the ground, we know that it weighs there about a quarter of an ounce, therefore there is that pressure of ether upon it: but the ether repelling equally

on all sides, if another guinea be laid upon the former, will heave that up with the like force wherewith it pressed the other down. Nevertheless we know this other guinea gravitates likewise downwards with the weight of a quarter of an ounce, therefore the superincumbent ether must press with the force of half an ounce, the weight arising from the different repulsion of the two ethers. By the same rule, if you put on a third guinea, it will have a pressure upon it of three quarters of an ounce: and so on, how high soever you raise the pile, the uppermost guinea will always be pressed down with a force equal to the weight of the whole pile. Let us now imagine a hole drilled in the ground quite down to the centre of the earth, and then filled up with guineas, how many would it contain? To take whole numbers, I shall suppose twenty to fill up an inch, and the semidiameter of the earth to be just four thousand miles: upon these data we shall make the whole number of guineas amount to five thousand sixty-eight million eight hundred thousand. But we must not reckon all these guineas to have their full weight, for whatever is carried under ground loses of its weight in exact proportion as it approaches the centre, and when it comes there, weighs nothing at all. But arithmeticians know that where numbers decrease in arithmetical

arithmetical progression down to nothing, the sum of them all is just half what it would be if they were all of the highest number; therefore our column of guineas would weigh what half their number, that is, two thousand five hundred thirty four million four hundred thousand, weigh in a scale above ground. Our next step will be to compute the weight of that prodigious sum. I have been told that at the mint they cut out a pound of gold into forty four guineas and a half: upon this footing we shall find our column amount to the weight of twenty-eight thousand four hundred seventy six tons troy. Supposing then the pressure of ether at the centre nothing, which cannot be certainly inferred from the want of weight in things there, which is thought owing rather to the contrary attractions of the several parts of the earth around them balancing one another than to their having no attraction at all; but supposing the pressure nothing at the centre, still that of our ether at the surface of the earth must act with a force equal to above twenty eight thousand tons within so small a compass as the superficies of a single guinea.

11. Having found such an amazing force in ether, we might think it sufficient to account for the attraction of cohesion too, which may well be stronger than that of gravitation,

vitation, although depending upon the same cause: for the latter results only from the differential strength wherewith the upper ether exceeds the lower, whereas particles in actual contact can have nothing between to thrust them asunder, therefore will be held together by the absolute pressure against their outsides, which we have found is more than enough to make them cohere stronger than any substances we know of; for I suppose a bar of any metal whatever, equal in thickness to the breadth of a guinea, would be broke asunder by a weight of twenty-eight thousand tons suspended at the end of it. But there is this difficulty in deriving gravitation and cohesion from the same source, that since the density of ether increases so fast as we have found it to do upon receeding from the earth, things would cohere much more tenaciously at considerable heights than they do near the ground, and a wire upon the Peak of Teneriffe would support a greater weight than might suffice to break it here below: but I never heard of its being found to do so by any experiment. Indeed the difference upon examination will not come out so great as at first sight one might expect, for the highest mountains being, I think, not above four miles above the level of the sea, the cohesion there will bear the proportion only of five hundred

hundred and one to five hundred compared with the cohesion here below; a difference too small to be discovered by any experiments upon the strength of strings or wires. But then, on the other hand, it is found that attraction prevails between particles very near together, though not in actual contact: in this case ether must find room to rush in between and push them asunder, therefore their attraction will depend upon the differential, not the absolute, pressure of external ether, and cohesion become gravitation, which we are told is not strong enough to exert the efforts made by the other. This brings us back again to Newton's position, That the two attractions result, if not from different causes, yet from different operations of the same cause. And we may conclude the same of fire, heat, muscular motion, and sensation, wherein he likewise suspects ether to have a hand; but it seems to operate differently in producing those several effects: which indicates a kind of choice and discernment not to be found in the motions of matter, unless where directed by some understanding; and this direction it may receive from the action of the mundane soul.

12. But how much soever we may resolve attraction into repulsion, this will not put an end to our enquiries; for repulsion is no more

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an inherent property of matter than attraction was. The learned tell us, that the particles of ether do not touch, but keep one another always at a distance: but it is an established maxim, obvious even to common sense upon a little attentive use of it, that no substance can act where it is not, nor operate upon any thing at the least distance from the place where it exists, therefore there must be some medium between the particles of ether pushing them asunder. Thus we shall be reduced to the condition of the Indian philosopher, who asserted that the earth was supported upon the back of a huge elephant, and the elephant stood upon a tortoise, but what the tortoise rested upon he could not tell: so after having demonstrated that all motions we see result from attraction and that from repulsion, what if we should be asked for the cause of this latter? for a cause it certainly requires, as matter cannot exert it by its own energy. We have observed before, that there is a prodigious consumption of force every moment, occasioned by the collision and pressure of bodies throughout the universe: and where shall we seek for a fund from whence to draw supplies for repairing the continual decays of motion? The shortest way would be to recur to Almighty Power, which certainly does not want efficacy to

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compleat whatever is wanted to be performed by it; and I know that how far soever we may trace our chain of second causes, we must come sooner or later to the First. But it is the mark of a weak mind to be forward in ascribing events to the divine operation which cannot presently be accounted for otherwise: and the soundest philosophers have made it a rule never to call in Omnipotence without absolute necessity. Since then we experience in ourselves a power of giving impulse to matter, and there is none of it but must lie within the reach of some spirit contiguous thereto, why need we scruple to believe it liable to the like action therefrom, as we exert upon our motory fibres? Thus we may assign spiritual substance for the first of second causes, from whose action the repulsion of ether, whence all other material agents derive their vigour, begins; by whose ministry the laws of nature are executed, the continual decay of motion repaired, the world and all things therein kept in order. Nor will the admission of such a power derogate from our idea of the Supreme Being. For since all, both material and spiritual substance, received their existence, their powers, and properties from him, and not a particle of either stirs unless by his permission or appointment, they are to be regarded only as instru-

instruments in his hands, and whatever mighty works they perform ascribed ultimately to him.

13. As to the force a spirit is able to exert, we have no measure in our own experience to determine it by; for though we can lift heavy weights, it has been shown in the former part of this work that we do not this by our own strength, for we receive considerable assistance from our animal circulation: yet we must begin the motion upon some little nerve or fibre to pull up the valve for letting in the vital stream upon our muscles, but what momentum we impart thereto I know of no method to ascertain. Our power must certainly be confined to very narrow limits because the sphere of our presence is so, for as nothing can act where it is not, we can act only upon such particles as may be drawn within that compass, and consequently can give no greater momentum than those little particles are capable of receiving. Yet for ought we know our strength may be very great in proportion to our sphere of activity, nor can we tell what limits to set it: therefore a multitude of us acting together might perform mighty feats upon huge masses of matter: If cohesion depend upon the action of spiritual substance, let us consider what weight a bar of iron as thick as the breadth of

of a guinea would sustain, and if the theory of gravitation before laid down be right, we have seen how vast a pressure lies upon bodies of the same dimensions: this then will be the force exerted by so much of that substance whose presence can extend throughout the surface of a guinea. And the same force that can hold the particles of bodies so strongly together, may suffice to dart them along, when detached from one another, with a proportionable rapidity: so that we shall not want a cause for the velocity of light, vibrations of ether, or other the swiftest motions that human sagacity has yet discovered.

14. If any body objects that by giving a spirit extent of presence I ascribe it bulk and consequently a consistency of parts; I shall desire him to resolve me two questions, Whether he denies God to be present throughout all immensity, and whether he conceives him to have bulk or to consist of distinguishable parts? And I shall refer him further to CHAP. IV, V. where I have made it evident, at least to my own apprehension, that we are individuals not consisting of parts, nevertheless that there is a certain portion of space throughout which we are totipresent, because we can receive the action of many corporeal particles at once which cannot

not be brought into contact with a mathematical point. Since then we have each of us a certain sphere of presence, a multitude of these spheres may extend, to any magnitude in proportion to the numbers of them, and the spirits residing in them, having a communication of ideas, will join in exerting their activity throughout the whole magnitude composed of their spheres. Thus though the strength of each singly, by reason of the narrowness of their presence, be very trifling, perhaps scarce able to lift a mote in the sun beams; yet by their united force they may perform more stupendous exploits than Milton's angels, and without the trouble of loosening to and fro, from their foundations may pluck the seated hills with all their load, rocks, waters, woods, and by their bases broad uplifting rear them high in air, or toss with rapid whirl o'er occean's furthest bourne. For we know the efficacy of union to produce strength out of weakness, as well in the works of human industry as of nature. When a number of men are disciplined to act at one signal, or obey one command, what masses cannot they move, what performances cannot they atchieve! We know of few things weaker than water or more yielding than air: yet what havock and devastation do storms and inundations make by

by the combined force of little corpuscles, thousands of which one might blow away with a breath! How feebly does one grain of sand attract another? so that we cannot discover it by the nicest experiment: yet it is the aggregate of such attractions from all the grains in all the earth, that holds down the moon in her orbit. But the mundane spirits, intimately persuaded of the benefit of unanimity, and by their mutual participation of perceptions having the same understanding, the same motives, and apprehensions of things, enow of them will always be ready to concur in compleating every work that shall be discerned expedient.

15. An objection may be started here against the possibility of our spirits doing the mighty things ascribed to them above notwithstanding their strength and unanimity: for action and re-action being reciprocal and opposite, whenever a spirit goes to impel a particle of matter he will thrust himself backward with equal force, and though he may have some good friend behind to keep him steady, he will thereby impart the same force to him, who will likewise transmit it to the next beyond and so on until the thrust be propagated to the outermost bounds of the mundane soul, which, expanding by degrees, the parts of it must open, and thereby losing their contiguity

contiguity with either corporeal or spiritual substance, must lose both their percipience and active powers for want of materials to exercise either within their reach. But though we find re-action constantly prevailing between bodies, it does not necessarily follow from thence that the like prevails between body and spirit, one acting by impulse and the other by volition: nor have we reason to think it does from any thing happening to us in our common actions. We feel our limbs move and the outer parts of our body, but we feel no resistance from the inner fibres we employ in moving them: in short, we are so little affected by those first instruments of our action, and have so little notice of them, that Hartley and some others have denied that we ever move them at all, but insist upon their being moved mechanically by the vabratiuncles bringing us our perceptions. And this consideration may obviate a difficulty concerning the laboriousness of those tasks we have assigned the mundane spirits in exerting their utmost strength incessantly to produce repulsion, cohesion, and gravitation in matter, which may be thought incompatible with that happiness we have supposed them to enjoy. For there is nothing operose or toilsome in volition, our limbs indeed tire upon being over worked because they can bear no

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more than a certain measure of exercise, our reflections satiate by a constant repetition of the same ideas, because our organs lose their relish and return us uneasy perceptions instead of the agreeable ones they gave at first: but if we can find employment for a fresh set of muscles or bring a fresh set of objects to our imagination, we find as much amusement in them as if we had done or contemplated nothing before. The mind is never tired of commanding from morning to night, so long as the instruments are not tired of executing; therefore the actions of spirit are always performed easily without either weariness or satiety.

16. As we have supposed all space replete with material or spiritual substance, it may be doubted whether in that case there could be any motion of either, because there would be no vacant place for them to move into. But it is the more generally received opinion that spirit is penetrable by body, therefore can oppose no obstruction against the motions of that: and as I never heard it determined even by conjecture whether spirit be penetrable by spirit, it remains wholly uncertain whether they will obstruct one another. But admitting them neither penetrable by one another nor by body, though I have supposed them contiguous I have not supposed them present

present in every point of space; for the waters of the sea lie contiguous, yet are there many pores and vacant spaces between them: therefore spiritual substance may be considered as an extreme subtile fluid, continually at motion within itself, and admitting bodies to pass through it with more ease, than fishes swim through the water. But this is offered only upon supposition of their being impenetrable, which I have before declared my sentiments that they are not; and of loco-motion being necessary for them, which is more than I know to be the fact: for as they will have perceptions brought from every quarter, they will hardly want to change their situation in order to change their scene, and examine objects they could not discern before. But if loco-motion be requisite, I do not imagine they can move themselves nor one another: but as we are vitally united to some part of our body which carries us about with it wherever it goes, so they may join themselves occasionally to some particle of matter, which is going the way they desire. Nor need it be wondered that the courses of nature should go on so steadily as they do, if guided by voluntary agents, some of whom we might imagine, would proceed in a different manner from others, because we find them do so among ourselves: whereas bodies gravitate

gravitate and cohere, air condenses and rarefies, light reflects and refracts, always exactly in the same manner under the same circumstances. But when we consider that our own contrariety and changeableness of behaviour springs from the ideas starting up in our imagination, which each man has peculiar to himself, nor does his neighbour discern or stand affected by them, and that in proportion as every man possesses a more enlarged understanding and judgment we find him more steady and uniform in his conduct, we shall cease to wonder that these spirits, whose knowledge by their participation of ideas must extend much wider than ours, not liable to overlook things which when discovered must alter their judgment, should pursue constantly the same tenor of conduct; that what appears expedient to one should appear so to all, and what they judge proper to do at one time they should adhere to at all others without variation.

17. This entire unanimity of sentiment and perfect harmony of action, may well warrant us to look upon the whole as one thing, to which the material world will serve as a sensory exciting sensations and reflections, and exhibiting ideas, and the spiritual part as a percipient to receive them and a vivifying principle to invigorate and actuate the motions

tions of the other; having in a manner one understanding, one design, and one volition, making all together one compound as the human soul and body make one man. So that with the Stoics we may call the universe an immense animal, or say with Pope, All are but parts of one stupendous Whole, whose body nature is, and God, not the Almighty, but this created god we have been speaking of, the soul. This god, or animal, or glorified man containing all men (for it matters not what name we use so our ideas be clear) which is the world, will have a full discernment of all his parts with their combinations, proportions, symmetries, situations, and uses: nor will any thing minute escape his notice, for being not confined like us to one little cell in the brain, where we know nothing of the many secretions, circulations, and other transactions, passing in our frame, but his spirit, insinuating and penetrating every where, not an atom can stir without his knowledge and observation. Nor must we imagine him to receive sensations only from all these objects, for as the modifications of our organs furnish us with judgments, relations, abstractions, and other ideas of reflection, resulting from the notices of our senses, so his sensory the material world will supply him with the like in far greater abundance, free from that disorder

order and perplexity attending them in us, as being selected and purified in their passage through spiritual substance by the channel of communication: so that he will be all intelligence, perfect reason, and unerring judgment. And though we must needs admit him passive in perception, he will have such absolute command over the causes and instruments of perception that no thought can intrude against his liking. Yet we must not imagine him subject to those sudden starts and wanton sallies which too often hit our own fancy, for this would occasion strange irregularities in the visible world, but best pleased with that regular scene of contemplation exhibited by the stated laws and steady courses of nature, and therefore constantly employing his activity to execute and preserve them in order. For his activity being coextensive with his intelligence, every limb of his immense body will be under his immediate government, so that all the motions therein will be voluntary; nothing automatic, or at least the automatic be exactly directed by the voluntary: and ether, whose various repulsions are the grand springs of all natural movements, may be considered as performing the office of nerves and muscles in moving the larger members. By his strength he rolls the huge planets along the

boundless sky; by his agility he dashes the light on all sides with inconceivable velocity; by his energy he produces gravitation, cohesion, heat, explosion, fluidity, contraction, and dilatation of the circulating vessels in plants and animals, and all other operations discernible throughout the visible world.

18. In him as parts are contained all the powers that men can imagine concerned in the phenomena of nature or affairs of mankind; for we might style the god or angel of the sun, the god of the moon, of Saturn, Jupiter, or the other planets, so much of his substance as actuates their motions and operations, and so much of it as surrounds every particular man may be called his guardian angel or demon: so that by this theory one might almost reconcile the pagan theology with sound reason and probability. Yet I would not suppose the same particles of spiritual substance to attend the moving bodies throughout their progress, but transmit them to others having the same dispositions, purposes, and activity, whereby there will be no variation nor irregularity in their courses. For we divide the ocean into seas, gulphs, and bays, the waters whereof continually change, so that those which compose the German Sea to day, may make the British

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Channel to-morrow, the Bay of Biscay the next day, and afterwards the Mediterranean. And as the wake of a ship, by which I think the sailors understand the stream drawn after the stern by its motion, follows the ship throughout her voyage, yet consists every moment of different waters: so wherever a man goes he may always have his guardian angel about him, the same in kind and quality, in character and ability, but not a minute together the same in personal identity. Nor can it be doubted that this spiritual substance, having so minute a discernment and perfect command over the particles of matter, might form them into any shapes or appearances he had a mind; or by throwing our sensory into proper modifications impart any knowledge, even such as could not naturally enter into the human imagination. Not that I mean to decide whether such things have or have not been done, but whoever believes they have, may find here a fit agent by whose ministry any commands of the Almighty may be executed, as well ordinary as extraordinary. For without such command, or some very substantial reason, we may rest assured he will not deviate a step from his usual method of proceeding. Therefore we need not fear any fantastic surprizes nor hurts from him; not for the same reason which

secured us against the vehicular people, because they were too feeble to affect any of our senses, for he wants neither skill nor ability to raise dreadful phantoms or rattle chains or terrify us with horrid dreams as well in broad sunshine as at midnight, nor to work all the feats of witchcraft and magic; but because such more than childish pranks are inconsistent with his consummate wisdom and importance of character. To entertain these apprehensions of him would be as idle a fear as if, upon our friend of the best credit and character, coming into the house, we should disturb ourselves lest he might steal a silver spoon, or take some sly opportunity to slit holes in our furniture: and we ought to be as backward in giving credit to reports of that kind as we should be in believing anybody who told us he saw a group of persons of the highest dignity and most venerable character playing at taw together in the street, or robbing an orchard, or practising the little mischievous tricks of an unlucky school boy.

19. But as we are perpetually sustained and protected, and the springs from whence we receive our uses and enjoyments actuated, by the mundane soul, so it may be presumed that we are likewise of some use to him. For embodied spirits, each confined with his several cell

cell and having no ideas unless what his particular sensory exhibits, must be allowed to operate differently upon the matter environing them from those which lie at large in the mundane substance, and thereby diversify the scene, presenting ideas he could not find elsewhere. For though I do not suppose him contiguous with our spirits, because then we should become one with him and participate of his knowledge, yet he may be so with the outside of our sensories, and by observing the motions there and knowing from what operations of spirit they must proceed, he may read our thoughts as currently as we read one another's thoughts in a letter. And if evil be necessary in nature, as we must conclude from its having admission therein it may be dispersed among the corporeal and vehicular states that the inhabitants of the mundane, by applying to the sensories of the other two, may attain the knowledge of evil without actual suffering. Thus our pains and displeasures, our vexations and disappointments, our errors and follies, which we look upon as oversights or neglects in nature, promote the service of more exalted Beings, doing them more good than hurt to ourselves. Our various constitutions, talents, passions, desires, professions and fortunes, all the transactions and dispensations befalling

befalling us, which we regard only as they affect our present condition, have a two-fold use besides: as they prepare us for our several functions in the vehicular life, and as they present objects wanted for the purposes of the universal soul and whereon his happiness in some measure depends. Perhaps our interests may furnish him with a principal part of his employment, for being compleatly happy and placed out of the reach of evil, he may have nothing to desire for himself, and nothing to do but exert his power and contrivance in lessening the burdens and enhancing the enjoyments of animal life as much as possible: so that for aught we know, the most glorified Beings may be constantly attendant upon the services of man, not for the greatness of his importance, but because he is the only poor creature that wants their cares.

20. Having given the fullest explication I could of that exalted Being the universal soul, the head and principal of creatures, let us now consider how well he may deserve the glorious things said of him in former times. And first we need not scruple to admit him for maker of the world, that is, the agent employed in executing that stupendous work: for penetrating into every pore of material substance, being all intelligence and activity throughout,

throughout, he might discern all the particles in Chaos, if ever there was one, know what they were severally fit for, assort them into elements, and of them compose habitable earths. Upon the word given, Let there be light, he might twist the sevenfold rays and dart them about in all directions, or upon a second word collect the main body of them into a Sun. He might give the heavy planets their tangential motion by one strong and exactly poised stroke. He might gather the waters from the dry land, having first scooped the capacious bed of ocean, and raised the equatorial parts, lest the diurnal rotation should cast up the sea above them. He might give the earth a twirl as easily as a child twirls round his whirligig, to produce the vicissitudes of day and night. He might thrust the poles askance twice ten degrees and more, that summer and winter, seed time and harvest, should never fail. He might draw out strings of viscous juices from the ground, and perforating them into tubes, and interlacing them artfully together, compose therewith the tree yielding fruit after his kind and the herb after his kind, whose seed is in itself. He might form the dust of the earth into animal organizations with proper members for walking or flying, or creeping or swimming, as soon as the breath of life should be breathed into

into them: and extracting the finer particles from the grosser, might work them into mental organs and sensories, fit for the reception of perceptive spirits who should be created for them to begin the race of men upon earth. And as he went on compleating his task, the Lord Almighty looked forth from heaven, and saw every handy work of his minister, and behold, it was very good. The six days' formation being ended, though God rested from commanding, his agent did not rest from acting; for his reason could now direct him how to proceed in sustaining the work he had been taught to make. He still continued to turn the grand wheel of repulsion, that first mover in the wonderous machine of visible nature, all whose movements follow one another uninterruptedly for ages according to stated laws and in regular courses without failure or disorder in any single wheel. Until the fulness of time being come, or the signal given from the throne of Glory, the same agent turning the wheel of repulsion the contrary way, will rend the mighty fabric asunder, throw the parts of compounds out of their order, dissipate them with a sudden explosion, and reduce all into Chaos again. From whence upon a new plan assigned, new systems may be formed, new earths stretched out, new vegetables and

and animals produced to cover and inhabit them.

21. I think offence cannot be taken against our ascribing the generation and sustentation of the world to a created Being, as it seems rather to rise than depress our idea of the divine majesty; and every thing done by the deputy, commissioned for that particular purpose is always esteemed the act of the principal. The very expression commonly used that God made all things by his word warrants our supposition of an intelligent agent who should understand and obey the word when spoken; and those writings which speak of supernatural effects many times declare them performed by the ministry of an inferior hand. It was not the Lord himself, but the angel of the Lord, who smote the host of Sennacherib: and when a promise is made of peculiar protection to some particular person, it is said that God shall send his angel to direct thy steps that thou hurt not thy foot against a stone. Nor do I apprehend any danger in removing the divine power as far as possible from those operations we see or know of, provided that we bear constantly in mind that all other powers must be referred originally thereto. Therefore how mighty works soever are performed, so long as we can conceive, God having a minister in his

his kingdom capable of executing them, we need not call in omnipotence: reserving only to that the prerogative of giving the powers and lights requisite for obeying his orders and fulfilling his word.

22. The powers and operations of the universal soul being settled, we will proceed next to consider his state and condition within himself: and we may agree with the ancient sages in pronouncing him immortal, unchangeable, compleatly intelligent, wise, and happy. For having nothing external, he will be secure against dangers and accidents from without: being not vitally united to systems of matter, their dissolution can effect him no otherwise than a change of objects, or of one thing for another taken into our hands does us: and consisting of similar parts, whose qualities do not depend upon their order or combinations, he will not suffer by their taking new positions, as we should do upon the misplacing an eye or an ear or any little fibre in our bodies; for every component spirit would be able to perform the same office with that into whose place it succeeded. Or if any thing were to happen in his immense body tending to his damage, being active and discerning throughout, he would know how to prevent the mischief in time. The extensiveness of his intelligence communicated

nicated perpetually from every part to every part, must render him universally knowing in all the combinations of matter, their situations, orders, motions, and secondary qualities, together with the judgments, reflections, and sciences resulting, or consequences and uses expectant, therefrom. All this, together with his exemption from passion and error, must make his wisdom consummate to provide effectually for his own interests and those of inferior creatures committed to his charge. For if in a multitude of counsellors there is wisdom, how great must the wisdom be of this innumerable host of spirits mutually imparting their lights from all quarters of the universe! Therefore he will act invariably right, doing always that which virtue requires, though without any other virtue than that of prudence; because he will want none other. For to us the virtues are necessary marks directing to that happiness we want clearness of sight to discover, and strength of mind to pursue: but he having a foresight of remotest consequences, and an intuitive discernment of their just amount, will see clearly what is best, and need no spur to instigate nor mark to direct him in the pursuit of it. The clearness and largeness of his understanding will secure him against all partial views and unsteadiness of conduct; for

for it is folly and ignorance that make us capricious, changeable, and inconsistent with ourselves; but wisdom is ever uniform and the same throughout; therefore he will have no variableness in his sentiments, his designs, or his measures, but approach as near to the divine immutability as can be conceived possible for created substance.

23. With all these accomplishments and perfections, we cannot doubt of his being unspeakably happy; and if any sparks of evil should be sprinkled upon him by contemplation of the miserable wretches in the two embodied states, they would be so overwhelmed with the joys flowing from elsewhere, that he would feel no more disturbance thereat than a man, having just received news of some great good fortune befallen him, would feel upon happening to break a China saucer. Nor need we apprehend his being satiated with the sameness of his prospect, having no other objects beside his own immense body to entertain him, with which, being long since perfectly acquainted, he can make no new discoveries for his amusement. For though pleasure cannot subsist without novelty in ourselves, because our bodily organs, losing their quickness upon repetition of the same objects, will not continue the relish they gave at first; yet where the spirits serve as

organs

organs to one another, it is not certain the same inconvenience must ensue. But supposing variety of objects and employments necessary to happiness, he will not want for plenty of either: for his immense body, the universe, though but one, and he have nothing external to gaze at, consists of numberless systems, each containing a multitude of under parts, whose incessant movements perpetually change the face of nature and exhibit a diversity of scenes as well among the larger members as in the minuter particles. Nor is it necessary that every component spirit should have the whole in contemplation at once; for large as their capacity may be we have never represented it as infinite; therefore their streams of communication may be varied by the pouring sometimes one kind of perceptions upon each other and sometimes another; or they may travel to and fro to visit different regions and take a nearer view of objects that lay at a distance from them before. Add to this, that the follies, the passions, and miscarriages, of embodied creatures will probably furnish them with new scenes unknown to wisdom, and dissimilar to any thing of her production. Nor need we fear their want of employment to engage them, for considering the vast consumption of motion everywhere, which requires their continual

continual efforts to renew it, besides the mutual communication of perceptions, and choice of those proper to be communicated, they will constantly have enough to do in giving impulse to the matter falling within their reach. For as they do not run along with the bodies they actuate, but hand them on to one another, they will have different functions to execute: sometimes busied in pushing forward the corpuscles of light, spreading the tails of comets, or regulating the vibrations of ether according to their proximity or distance from masses of gross matter: sometimes in gravitating heavy weights to earths, or holding the parts of metals in cohesion, or giving fluidity to liquors, or agitating the particles of fire, or contracting and dilating the circulating vessels in plants and animals.

24. We have heard talk of a beatific vision supposed to constitute or enhance the happiness of disembodied spirits, nor shall I attempt to disprove the possibility of such a supposition, for we know not the extent of our perceptivity. We may be capable of new senses, higher faculties and sublimer reflections, than our present organization can exercise. When totally disengaged from the veil of matter enwrapping us, we may be able to see even as also we are seen and discern sensibly

sensibly that glorious object which no man can behold and live. But without this extraordinary privilege we may well imagine the universal soul must attain a compleater knowledge of God than we can, though by the same way that we do, namely, by the contemplation of his works. For having the whole book of nature constantly open before him, and by the largeness of his understanding and mutual communication of perceptions throughout his substance, being able to comprehend the spacious pages at one glance, he will read there the whole divine œconomy, discerning the uses and wisdom of those parts which to us appear superfluous or mischievous, and forming a clear conception of the divine attributes, not excepting those unknown and inscrutable to man. Nor will it lessen his adoration to know, as from the account herein before given it may be inferred he must know, that nature is the work of his own hands and the regularity of her courses carried on by his own energy: for as a man who has done extraordinary things, if he thinks justly, will derive from thence a greater veneration for the power which gave him the sagacity and talents enabling him to perform them; so the universal agent will always bear in mind that he is but a minister and instrument in the

the hand of a superior upon whom he continually depends. For if God were to withdraw his material world for a moment, the spiritual would instantly lose its percipience and action, having neither object to discern, not subject to act upon, nor means of communicating perceptions where none where excited. Nor can he forget that how well soever he may continue the order of succession in the courses of nature, his operations must have had a beginning, his intelligence some premisses furnished for it to work upon, and there must have been some original order and position in matter to be the basis and foundation of his resolutions before he could make or act in pursuance of them. The existence of evil, which proves to us a stumbling block, would teach him a useful lesson, for we may presume he would not admit it willingly in any part of the universe under his care: but the necessity of its being scattered somewhere must convince him that he is not omnipotent, but under control of a higher power by whom that necessity was imposed. And if the courses of nature are sometimes to be changed, new systems to be formed, he will perceive modifications in his sensory directing them, thoughts and designs occurring there which he did not introduce himself. With all this we cannot doubt of his having

having as full an insight into the divine nature as is possible or requisite for created Being: he will find no perplexities in his ideas of the attributes, nor appearance of their clashing one with another: he will clearly comprehend the nature of infinite goodness, and be able to reconcile the permission of evil therewith: therefore will apply himself heartily to every task assigned him, well knowing that all are calculated for the benefit of the creature. He will be so intimately penetrated with the idea of the divine equity, that there will arise no opposition nor struggle for preference among the component parts of his substance: for each discerning that no hurt can befal another but what must redound to his own damage, the general interest will actuate them all, and self-love become benevolence. That sole virtue which accompanies us in the last stage of our existence, when the persuasions of reason shall be lost in intuition, and the expectation of future good swallowed up in the fruition of present.

25. This host of happy spirits called by one name, the universal soul, from their uniformity of action and sentiment, we suppose the receptacle for particular spirits as they can disengage themselves from their vital union with matter; and that upon disruption of a vehicle, the perceptive inhabitant will be

discharged therein and incorporated therewith: whereby the communication with spiritual substance being opened, it will instantly partake of all the knowledge and designs of its neighbours, and immediately take its share in their operations according to the station wherein it happens to fall. And though leaving the traces of its former memory behind, it will have the records of the universal sensory to inspect, wherein is preserved the remembrance of events happening throughout nature more exactly and fully than can be comprised in any animal organization. Thus, in this state, there will be no infancy nor growth of faculties or advancement in learning, but the new comers upon their first arrival will stand upon the same footing with the old members, as if they had resided among them from everlasting. As they act in concert carrying on one plan of operation, the act of all will seem the act of every one, and each feel a kind of consciousness of what is performed by the whole company. For as among men concurring heartily in one undertaking, all claim the credit to themselves; the majority at an election exult as much as if the choice had depended upon their single votes, and a tradesman at a coffee-house triumphs in a victory and thinks himself entitled to say, We have beat the enemy, because he pays some trifle towards

towards the supplies, or is a member of the nation whose quarrel it is; so the members of this mighty agent, the universal soul, although singly feeble, will partake in the joy of those stupendous works carried on by their united strength. For all contributing their activity to roll the celestial orbs in their appointed courses, to diffuse light throughout the vast expanse, to keep the elements in order, to distribute all things upon earth by number, weight, and measure, to produce and preserve the several species of plants and animals, to direct the affairs of men and turn the wheels of fortune, to fulfil invariably the Will of God and execute the mighty plan assigned them, the pleasure of the performance will redound entire to every one as if he had been the sole agent employed.

26. With all these sources of enjoyment, the contemplation of universal nature, the science of all operations as well in the largest as the minutest bodies, the possession of an enlarged understanding and perfect reason, the assurance of an immortality and unchangeableness of character, the constant occupation without labour or difficulty in the most magnificent, delightful, and important works, the consciousness of acting invariably right, and the clear conception of the divine attributes, we may well admit this the happiest

piest state created substance can be placed in, therefore we need seek no higher, but may take this for our idea of the kingdom of heaven. In that kingdom almost every thing is the very reverse to what we find it upon earth: here we live single spirits vitally united to unwieldy masses of matter which but ill perform our services, for most of the parts of our composition lying out of our notice we have no command over them, their motions are for the most part mechanical and automatic, nor can we prevent diseases and disorders from gathering among them, nor passions, habits, and thoughts, cast upon us involuntarily from them; we depend upon things external for our uses and enjoyments and the sustentation of our bodies, therefore are liable to continual wants, disappointments, and accidents. There the spiritual substance being diffused every where has no more of matter to deal with, than it can manage, directs the movements of every limb and fibre in his immense body, which containing every thing requisite for his uses and enjoyments within itself, and being subject to no decay, needs nothing external; and each corporeal particle by the communication of perceptions serves the purposes of many spirits. Here we have the whole portion of actual evil distributed among us in all its various forms of pain, disease, disappoint-

disappointment, vexation, trouble, and uneasiness: there they have only the idea of it, which perhaps they find necessary to their happiness; for perception being transient and momentary, and probably not excited without some motion in matter, if they had not an apprehension of damage to ensue upon their forbearance, they would have no inducement to exert themselves in giving those motions to bodies from whence they receive all their perceptions. The narrowness of our views occasions private aims and contrariety of interests, so that half our cares are laid out in opposing one another's designs, whereby much of the power we might have is lost: but they, using one common understanding, proceed with perfect harmony, so that their strength, though singly far inferior to ours becomes immense by their unanimity. We follow the gratification of our desires thinking of nothing further, and God works out his own purposes from them, giving an issue to our endeavours contrary to what we intended: they keep their eye steadily fixed upon the Will of God which it is their constant desire and delight to fulfil, therefore as nothing can happen any where contrary to that Will, nothing can happen contrary to their wishes. We labour for the most part to serve ourselves, not much regarding what

ensues

ensues therefrom to our neighbours, nor can we do otherwise in many of our actions wherein nobody else has any concern: they pursue always the general good, so that love, pure judicious love, actuates all their motions, displaying itself in a cordial obedience to the fountain of blessings and sincere attachment to one another's interests.

27. This spiritual community being heaven and all space not occupied by matter being replete with spiritual substance, it follows that heaven is not local but everywhere, all around, above, below, on each side, and within us, filling not only the starry regions, but likewise the air, the earth, and the seas, and permeating the pores of all compound bodies. Therefore that we are out of heaven, is not owing to any distance we stand at from thence, but to our being pent up in walls of flesh which cut off our communication with the blessed spirits, and shut us out from all participation in their lights and their joys. We are like persons inclosed each in a sentry box having all the chinks and crannies stopped that might let in the least light or sound, and in this condition set down among the splendid throng in a full Ridotto: they would be alone in the midst of company, as knowing nothing of the gaiety and diversions passing round them. If they had strings

reaching

reaching to one another's boxes they might make signs by them, learn in time to understand one another's motions, and carry on a sort of conversation together; but very imperfect in comparison of what they could do if let out and permitted to converse like other people. So we, while imprisoned in these earthly tabernacles, see little and know little of all that passes around us, and converse together imperfectly by the corporeal mediums of sights and sounds. Upon the dissolution of this gross body, we may find an inner integument still clinging round us; but when the appointed time shall deliver us from this too, we shall not have far to travel before we join our company: for wherever our vehicle leaves us, there we shall find heaven, and take our place and occupation therein immediately without any of that surprise, or awkwardness, or agitation, usually thrown upon our corporeal organs by scenes wholly new, but with the same readiness and familiarity as a man coming off a journey, having his own house, his own family, his own furniture and conveniencies about him; for we shall then understand and apprehend, not by our old ideas, but by those of the universal mind, and partake in the expertness and full-digested remembrance belonging to that.

28. Though this notion of the mundane soul

soul was first broached by the old philosophers, I hope the moderns will not be offended with me for attempting to revive it, since I have brought it at least to my own thinking compatible with some of the most important articles now received among us. For one cannot well imagine a more intimate communion of saints than that above described: the exemption from evil implies a release from punishment, and full forgiveness of sins: the unchangeableness and immortality of this soul are but other words to express a life everlasting: our incorporation thereinto, whereby we shall have the whole frame of material nature to supply us with objects and serve as instruments for us to act with, may be reckoned a resurrection of the body; for though this body were existent before, yet we may be said to rise again upon our admission into it, by being restored to our percipience and animal functions. Indeed, the vehicular state is a resurrection too, therefore that may be reckoned the first, or resurrection into the kingdom of Christ, and this of the mundane state the second, when he shall deliver up all power to the Father; and whereas we are taught to expect a spiritual body on our rising again, we cannot thereby understand one composed of spirit, for that were a contradiction in terms, nor can any material composition

position better deserve such epithet than that whose every member, limb and fibre, is actuated by spirit. As to the vulgar notion of a resurrection in the same form and substance we carry about at present, the various ways in which it has been expounded, and many difficulties raised upon them all, sufficiently declare it untenable: and the reason ordinarily given, because the body being partaker in the deed ought to share in the reward, as well requires a resurrection of the sword a man murders with, or the Bank note he gives to charitable uses; for our mind is the sole agent, and our hands are as much instruments as any thing we hold in them. But since the mind can neither perceive nor act without matter, there must be a resurrection in some sense or other, that is, a re-instating in some composition answering the purposes of a body, to render her capable of another life. Lastly, the occupation proposed for us there is the glorifying our Maker, which cannot better be performed than by steadily fulfilling his Will, constantly attending his services, carrying on his appointed courses, executing his laws of nature, and heartily concurring in his beloved work, the general good and happiness of his creatures. This seems a more acceptable praise than singing hymns and psalms to all eternity: for obedience is

better

better than sacrifice, and to do the Will of God than the fat of lambs.

29. I know of but one exception can be taken against the idea here given of heaven, which is, that it leaves no room for the blessed spirits to differ in their degrees of happiness as one star differeth from another star in glory. But since the communication of perceptions which constitutes their happiness is voluntary, whoso pleases may suppose them communicated in greater or less measure to every one according to his deserts, as we give more or less countenance to different persons in the same company according to our esteem of them. Yet it being customary to consider no more than one world besides this sublunary, and to speak promiscuously of the intermediate and final states, I should rather choose to interpret whatever is said of the different degrees of happines as relating to the former, than admit a partiality and particular favour among the most perfect of created Beings.

30. I have now offered what I can conceive may be the condition of our intermediate and final states after we shall leave this world and be seen no more. My intention herein was to give a livelier idea of some important truths, which I think discoverable from our observation of nature and knowledge of the Divine Attributes, than could be entertained

entertained while they remained in abstract and general terms: namely, that there may be life, enjoyment, and action, out of this body; that there are other beings to whom what appears useless to us, may be serviceable; that there is a connection of uses and interests throughout the whole creation; and that whatever befals us here, though seeming nugatory or hurtful will turn to our account some time or other. So far as any one shall find what I have here suggested answer this purpose, and impress stronger upon his imagination or display in more sensible colours what he knew before to be true, I shall be glad he will attend to me: for I did not propose it as an article of faith, and pretend to prove nothing by hypothesis, nor am so wedded thereto, but than if any thing therein shall be made appear contradictory to the judgments of sound reasons, or hurtful to the mind or good manners, I shall be the foremost to reject it.

CHAP. XXIII.

THE VISION.

Speciosa dehinc miracula promat,
Antiphaten, Scyllamque, et cum Cyclope Charybdin.

ONE day, after having my thoughts intent all the the morning upon the subject of the two foregoing chapters, I went out in the evening to a neighbour's house to recreate myself with a game at cards. After some time spent in this amusement, we sat down to supper, during which, acording to the English custom, we began to settle the affairs of the nation, particularly that important point now in agitation, a Spanish war, whereon we could not come to a satisfactory determination. For though we depended upon the valour of our fleets and armies to take Portobel, Carthagene, and the Havannah, in one campaign, we could not be sure that would end the war, and were a little doubtful how long we might be able to continue raising twelve millions a year, and conveniently pay the taxes necessary for the interest of such enormous sums. Under this difficulty,

culty, and finding that our own politicians could not agree, we wished for some of those to extricate us, of whom we had read wonders in former times, the Godolphins, the Burleighs, and the Walsinghams: and some of the company, who held that mankind degenerates every age, as well in bodily strength as in mental sagacity, wanted to conjure up the souls of Julius Cæsar or Philip of Macedon. This latter thought turned the discourse upon necromancy, and leaving the national concerns, which we believed would go on full as well without us, every one fell to consider how he might best gratify his curiosity if he were possessed of that art, what persons he should evoke from the shades, and what questions he should put to them. One was for seeing his relations and friends again, another for a tete-a-tete conference with Elizabeth or Mary of Scots, others for calling up Belisarius, Cicero, Archimedes, Alexander, and the heroes of antiquity: till I happening to say, I had read somewhere that Socrates learned to play upon the fiddle at threescore, that Plato made love-verses in his youth, and putting them in mind that they had all heard how Orpheus used to draw the trees and beasts after him by his music, the ladies declared they should be vastly delighted to hear a solo on the violin by a philosopher,

pher, or hoped his scholar would accompany him with an amorous sonnet of his own composing, and that the entertainment might conclude with a dance of forests full of lions, bears, and tigers, to a jig of the Thracian harper. Being thus drawn to think of the ancient sages, we proceeded to some of their peculiar doctrines, wishing to hear them explained by themselves, as likewise to know some particulars concerning their occupations and manner of living in the regions where they now inhabit. With conversation of this kind, partly serious, but mostly jocose, we passed the time until the company parted, which they did pretty early, some of them having a great way to go. When I came home, finding it not my hour of bed time, and being unwilling to fatigue my spirits with any thing that might be called study, I walked to and fro in my chamber giving my thoughts a liberty to run as they listed. I found ideas start up promiscuously from what I had thought of in the morning or heard in the evening, each introducing the next by any slight connection in that transient variety and wanton assemblage customary with imagination when judgment throws the reins upon her neck. In this manner I continued to be amused while undressing and until laid upon my pillow: when having neither cru-

dities

dities, nor crying sins, nor debts, nor hopes of preferment, nor schemes of cajoling a county, or buying a borough, to break my rest, I presently fell fast asleep.

2. I cannot tell how soon afterwards it happened, but methought something broke on a sudden in my head, in the manner I have heard described in an apoplectic fit. Instantly I found my limbs and all my outer parts benumbed so, that I had no feeling in them, yet I had still a feeling of my muscles, whose motions I could distinguish plainer than before: for I could perceive myself swell them in thickness and contract them in length, thereby drawing the tendons fastened to them, but what these tendons drew I could not perceive having no knowledge of any thing beyond. But this lasted only for a moment, for the muscles quickly lost their feeling too, and I could perceive no further than the nerves or strings of bladders by which I injected a subtile fluid into them. Thus my sense seemed gradually to retire inwards, and as it withdrew, sensation seemed always to reside in the extremities of those parts wherewith I still retained a connection, and to convey notices from them which it had not done while it had any to convey from others beyond them. Just as a man straining to look at a distant prospect, overlooks things close

before

before him, but if clouds intercept his sight from the remoter scenes, his eye contracts and presents him with a distinct view of those lying nearer. At the next step, my perception was confined to the valves closing the orifices of my nerves, which I could open and then feel the animal spirits rush in like the stream of a river when one pulls up a floodgate. At length I found myself reduced to my sensory, where I could discern ideas of reflection and abstraction like pictures hanging round the walls of a room; or rather like those machines shown about for a sight, where the images continually change their places, or vanish, and others are made to start up by unseen springs: but I had not leisure to observe their motions, for the whole of what I have related passed in less time than I have been relating. The last thing I perceived was that I seemed clinging to something hard like a stick, much in the condition of a man who hangs by both his hands clasped round the bough of a tree, only with this difference that the bough I clung to, moved with a prodigious swiftness and dragged me along after it. Not liking to be hurried on, I knew not whither, with such impetuosity, I let go my hold, when instantly the stick slipping away left me behind utterly destitute of all sense and perception whatever.

3. How

3. How long I remained in this state of total insensibility I know not, but was first roused out of it, by something brushing along nimbly by me: I felt it touch me gently as it passed sometimes on one side and sometimes on the other. These sensations set my ideas afloat again, and though they appeared very obscure and confused, like those of a man not half awake, I had discernment enough to persuade me that I was now a defunct: that the stick I had clung to was that part of my human composition whereto I had been vitally united which, as I afterwards learnt, being carried on with the annual motion of the earth after the rate of about nine hundred miles in a minute, had departed from me upon my quitting my hold: or in other words that I was actually departed into the other world. I rejoiced however, to find I still retained my existence and perceptivity, and having been piously educated, cast up a short but fervent ejaculation to that power who governs both worlds, with an assured confidence of his being alike able and willing to provide for me in this, as well as he had done in the former: but knowing that we have no title to expect assistance until having done the best we can by our own strength I resolved not to be wanting to myself; for I presumed my activity remained with me too.

but how to exert it was the question, for I knew of no limb or organ of sensation belonging to me, nor could find any muscle or instrument to act with. However, I determined to use my endeavours, and believing that the brushes I received were to be the first rudiments for laying the foundation of my future understanding, I made one strong effort at random with an eager desire of catching hold of whatever occasioned them, that I might feel what it was made of. Immediately I seemed to stretch out a hundred arms all around me, but with no better success than a man who should thrust his arms out at window, while the bricklayers are sweeping down tilesherds, brickbats and pieces of mortar, from the gutters above him. for I felt my limbs knocked about incessantly by a shower of hard balls, which besides hurting me grievously, turned me round and round, by the violence of their strokes, as a chaff is whisked about in a whirlwind. This made me the more earnest to grope about for some stay which might keep me steady, but the more I strove the worse it proved, for no stay could I find. I do not know what might have been the consequence if I had not presently perceived something hold me and draw me aside from the troublesome stream of bullets: but as some of them still struck against

my

my fingers, I judged it prudent to draw in my arms and give myself up to the management of my new protector.

4. I now lay quiet and easy awhile, well pleased to find I had no bruises remaining, and that my blows smarted no longer than just in the instant of striking: but soon a new desire started up in my mind of seeing what it was that took so friendly care of me. As I did not know whether I had any eyes nor where they lay, I cast my attention every way in hopes of finding a peep hole: upon this effort I presently saw little flashes of light sparkling and vanishing again on all sides of me, together with various objects, but all indistinct: being now satisfied I had the faculty of seeing, I attributed the little use I could make of it to my own hurry and want of management; so resolving to proceed with more calmness and caution, I confined my endeavours to a part near that that I was held by. After repeated trials I found I could form a set of optics, but they would return back again, almost as soon as I had thrust them out; till by a little further practice I learned to keep them steady so as to observe any thing before me. I then beheld a kind of sack or bag filled out like a bladder with air, uniform everywhere excepting that from one place there came out the arm

which held me, and from another a longish neck with a head upon it, having a meagre lank-jawed face, very like the prints I have seen before some editions of Locke's works. It looked upon me stedfastly with a mild and benign aspect, and the lips moved as in speaking. This made me quite impatient to hear what was said, but I was as deaf as a post: however, having already found myself provided with hands enow, and eyes enow, I did not despair of finding plenty of ears too, if I could but tell how to open them. My whole attention and desire being now bent upon hearing, my eyes sunk in directly, and left me in the dark, but I heard a confused jumble of whispers, short, broken, and inarticulate at first, yet that did not discourage me, believing I should manage better by degrees as I had done in the use of my sight. Accordingly I could soon distinguish my own name repeated, which surprised me agreeably to find I was among friends. How's this! thinks I to myself, that the retired Ned Search, scarce known to twenty people in the other world, should be so well known here that the first person he meets accosts him by name! It must certainly be some old acquaintance whose face I have forgotten departed hither before me. Sure it can never be really John Locke himself sewn up here

here is a sack for his sins, for he died before I was born. After this soliloquy, reflecting that the more haste the worse speed I moderated my impatience, and observing my motions carefully and minutely, it was not long before I formed a compleat ear, with drum and every thing requisite for the auditory function.

5. My good friend perceiving me prepared for an audience addressed me as follows. Welcome, Ned Search, into the vehicular state: you are in the hands of one who is not an utter stranger to you, though not your co-temporary: for know that I am John Locke, with whose writings you are not unacquainted. I have observed a faint resemblance in your way of thinking with mine which, though mingled with a great diversity of character, has given me a family kindness for you. I was apprized of your being to make a visit here, and came this way on purpose to assist you. I have already given you a seasonable relief when you were tossed about among those flying balls yonder, and am ready to do you further service in any way you shall want. Consider you are but a baby just born into this new world, and may find it expedient to put yourself under some tuition.—It is natural to suppose I wanted very much to thank him for his kind assistance and offers

of

of continuing it; and to declare my willingness to submit to his guidance until he should teach me how to manage without giving him that trouble; but I knew not how to express myself. The business now was to attain the use of speech, which I no sooner attempted than I felt myself hung round with mouths and tongues innumerable. I was yet so inexpert in my faculties that I could exercise no more than one at a time; If I went to look I could hear nothing, if I listened I could see nothing, and now I tried to talk I could neither see nor hear: so wanting the guidance of my ears to direct me in the formation of my words, I strained all my mouths to make as much noise as possible that I might be sure of being heard; like those disputants who make up for their want of sense by their vehemence of vociferation. After some little time spent in this violent exercise, I returned to listening again, for suspecting my pronunciation might be somewhat defective I did not doubt my good tutor, would set me right. I heard him laugh most immoderately, and when his mirth was over, Prithee, Ned, says he, what didst thou make those hideous mouths at me for? If you could have seen yourself you would have been frighted. Why you made a worse figure than the picture of Fame in a folio Virgil.

Virgil. I guessed at your meaning by your gaping, that you wanted to speak to me, but not a single sound did you utter. Do not you consider that though you do not want for tongue you have neither lungs nor respiration, and without breath the other organs of speech are useless. We do not talk by the mouth in this country, and if I showed you one in my face, it was only to put you upon exerting yourself, by exciting a desire of conversing with me, because I knew you had no notion of any other way of speaking. Look at me once more and observe how I manage: but contrive if you can to hold out an ear at the same time, for else you will not believe but that I play you tricks.——I endeavoured to do as I was bid, and as use makes perfectness, after two or three unsuccessful trials, I learned to see and hear together. I then saw his face had no mouth nor opening below the nose, but from thence downward was all enormous chin: nevertheless I could hear him speak distinctly. I took notice indeed that his voice was something different from the human, having a little twang like that of string music.——Nay, says he, do not stand staring me in the face, you will learn nothing there: look down upon my vehicle.——I did so, and observed little fibres bouncing up with great strength and agility

agility in a kind of net-work, consisting of various shaped meshes. I can liken them to nothing so well as the little wrinkles continually changing their form in the skin on top of warm milk set in the window to cool, only they moved much quicker, and with a more tremulous motion.——There, says he, that is our way of talking: now try if you can copy the style.

6. I tried and tried again with might and main, but all to no purpose; for though I found myself all over in agitation, like a Quaker when the spirit pours plentifully upon him, yet not a single sound or whisper could I get out: so that I began to despair of ever making progress in this new-fashion string language. My good patron saw my distress and laid a little innocent plot to relieve me. Your strokes, says he, are too gentle, and have too long intervals between. Do not you know the strings of a harpsichord will shake a long while after they cease to give any sound? such feeble quiverings will do no good: you must make your pulsations a great deal stronger, with nimble jerks following instantly upon one another. But I find you do not care to exert yourself: nay, if you grow idle, I must take another course with you.—On a sudden his head changed to the form of a lion's, with great gaping jaws full of monstrous fangs,

fangs, and he shot out twenty paws armed with claws pointed as sharp as a needle. I was horribly frighted at this unexpected freak, in a friend and a philosopher, which I took for a fit of frenzy that had seized him. But not knowing how either to get out of his way, or defend myself, I exerted all my strength, and cried out O! with a more violent scream than that wherewith Belinda rent the affrighted skies when the rape was made upon her lock. Very well, says he with a smile, having instantly resumed his human benign countenance, now we have broken the ice we shall go on swimmingly, I did not intend to hurt you: do not be angry with me for frighting you into a scholar when I could not make you one by instruction. But do me the favour to try whether you cannot repeat your O, without being in a passion: you need not bawl it out quite so vehemently as you did just now.—My terror had left so strong an impression upon my fancy that I had a clear idea of exery little motion it had occasioned within me: with this help I found I could say O, in cool blood, as often as I pleased, and with as careless a tone as a very polite congregation, while adjusting their dress or thinking of their routs, when that little particle occurs in the responses of the litany.—Courage! my boy, says the preceptor; now

you

you are perfect in O, we shall soon teach you A, E, I and U: but mind me, child, you must ply close to your lesson and follow my directions, they will make your learning the easier.—Ay, thinks I, that I shall with a willing mind, for I long mightily to be asking you questions.———

You know, continues he, that our faculties assist one another: therefore try now to thrust out a neck and head, with a pair of eyes and ears to it, that you may see yourself speak.—I obeyed orders, and turning my face downwards, saw that I was made just like my neighbour: both like two tortoises only inclosed in bags instead of shells. I did not think of amusing myself with bradishing arms and legs about, for being overjoyed at having recovered my speech, though as yet consisting only of one simple sound, I kept plying my *O*'s with great delight in all pitches of voice from the highest to the lowest, all the while diligently watching the little fibres as they jumped and vibrated upon my skin.—Bravely done! says Locke. Why, you perform as dexterously as if you had served an apprenticeship: it is not every body can bend his neck so easily the first time. This is an advantage attending us who have used ourselves to reflection, for most of those who come from the other world, have a great stiff-

ness

ness in their necks, they can see any thing sooner than themselves. But since you have such a facility at retrospection, I would recommend to you to pull in your head, and examine what passes within your vehicle while you perform any of the functions you are already master of.——By following this admonition, I discovered that my bag or case was lined all over on the inside with little hairs like the nap of velvet, which were the first instruments for me to act upon: for by squeezing any one or more of them, as one squeezes the kernel of an apple between finger and thumb, I could shoot them out, and in this manner performed all my actions; and I observed that many of them produced no external motion, but served only to present me with ideas of reflection. But my discovery of such a multitude of springs I had to employ, subjected me to one inconvenience: for those of different uses being promiscuously intermingled together, and every use requiring several of them to concur in operating towards it, I made frequent mistakes by touching the wrong springs. If I went to stretch out an arm, I should sometimes loll out a long tongue; if I wanted to form an ear, I should kick with a foot: if I endeavoured to look earnestly at an object, I should find a mathematical problem start up in my imagination.

imagination. So I resolved to have recourse to my instructor to teach me the proper command of my faculties, and I did not doubt but he would begin with that of speech which was what I wanted most earnesly to attain.

7. It would be tedious to relate all the particular lessons he gave me; let it suffice to say that he proceeded much in the same manner we teach children to read, instructing me first how to form the sound of letters, then syllables and afterwards words. But I found the most difficulty with dipthongs, vowels preceding one another, and syllables having as much vowel as consonant. I could not say Chariot nor Extraordinary, but Charrit and Extodny, like the ladies, nor Beloved or Moveth, but Blovd and Moves, like most young parsons in reading the exhortation: nor could I presently get the knack of joining my words into one continued sentence, for in my first essays, making a kind of stoccato musis, there seemed a stop between every sound; so he was forced to begin with sentences that we should account the most harsh. The first he tried me upon was that line of Ausonius, Sic himi nux, nox, nix, nex, fuit ante diem: then we went to Drayton's court of Fayrie, Hop and Mop and Drop so clear, Pip and Trip and Skip, that were to Mab their sovereign ever dear,

dear, her special maids of honour. Fib and Tib, and Pinck and Pin, Tick and Quick, and Jill and Jin, Tit and Nit, and Wap and Win, the train that wait upon her. But he brought me pretty soon to Pope's harmonious versification, While melting music steals upon the sky, and softened sounds along the waters die, Smooth flow the waves, the breezes gently play, Belinda smiles and all the world is gay: then to the Italian of Tasso, Ed al pavone spiegar la pompa de l' occhiute piume: Virgil's Avertens, rosea cervice refulsit, ambrosiæque comæ divinum vertice odorem spiravere; pedes vestis defluxit ad imos, et vera incessu patuit Dea: and lastly to some flowing Greek words, as Genet, argurioio, bioio, and Met okeanoio roaoon.

But, says he, we have another language among us we call the Sentient, in distinction from the Vocal, wherein I have been speaking to you. This is carried on by applying our vehicles close to one another, and raising certain figures or motions on our outsides, which communicate the like to our neighbour, and thereby excite in him the same ideas that gave rise to them in ourselves, making him as it were, feel our thoughts. This is a much completer way of conversing, being not liable to misapprehension, provided the recipient takes care to remove all his own ideas, that none

none of them may confound or interfere with those delivered: but to do that effectually, requires great dexterity and long practice, therefore I will not attempt to teach you. You have gotten one language and that may serve your purpose while you stay here, so you be careful to employ it well.

8. It is easy to guess what was the first use I ought to make of my voice, as soon as I had attained a competent skill in the management of it: the polite Reader's own imagination may suggest better, than I can relate, what fine speeches I made to thank my benefactor for the pains he had graciously bestowed upon me, to express the joy I felt on hearing that I had a particular share in his favour, and to assure him it should always be my utmost ambition to improve those features wherein he was pleased to say I bore him some faint resemblance.——Truce with your compliments, says he; we deal but little with that coin in this land of sincerity: we find an immediate pleasure in doing a good-natured thing, so want not the spur of applause to instigate us: we follow virtue for its own sake, that is, for the secret complacence of mind constantly attending it. But lest you should think the liking I have taken to you only a sudden fancy that may wear off again presently, be assured I look upon you as a relation,

relation. You know I had no children upon earth.—I beg pardon, says I, for interrupting you: but though you left no issue of your body, you had a more prolific head than Jupiter, for he brought forth one single Minerva, but you have a most numerous family: the whole body of sound reasoners in the nation I came from, of which I should be proud to be admitted an unworthy member, derives from you. He smiled at this conceit. No, no, says he, it is not that way I make out the kindred; I trace it from a higher stock: it is but since your arrival here I consider you as my child, before I regarded you only as my cousin. I had no descendants below, and we being here Isangeloi, without marriage or sex, have no means of raising up any. Such of us as stand so circumstanced, especially those who have been tired out with the comfortless state of an old batchelor, provide themselves families by adoption, wherein we commonly choose among those of the same lineage with ourselves: for similitude of sentiments conciliates affection, and it has been observed in the race I am going to speak of, that the same turn and disposition of mind, runs through the whole line.

You must have read that in the early ages, such as applied themselves to the study of nature were reputed conjurers by the vulgar, thought

thought knowing and expert in every thing, and dignified with the appellation of wise men: not that they ever assumed this title to themselves, as being more sensible than anybody how little human science deserved it, but they could not help what other people called them. At length Pythagoras prevailed to have the name of wise man, changed into that of admirer of wisdom, by which he intended to take upon himself the character of a person assiduously employed in the search of knowledge, without ever pretending to have attained it compleatly. Thus he became the founder and father of Philosophy, and his descendants for a while preserved the same tenor of conduct and temper of mind; always inquisitive, always improving, sensible their greatest wisdom lay in the knowledge of their ignorance, and unsolicitous to conceal it. But in process of time, another set of persons mingled among them, whether really of the family, but tainted with a corrupt mixture of foreign blood, or whether a spurious issue gaining admittance through the negligence of the heralds. These folks, finding how great submission had been paid to the ipse dixit of the founder, and from thence supposing he delivered his doctrines as oracular truths, never to be controverted or examined, thought to prove themselves his offspring by

by an air of positiveness and self sufficiency: so they set up for oracles too, issued their Ipse dixits like the edicts of an emperor, and reassumed that claim to wisdom which he had taken so much pains to reject.

From thenceforward the family became parted into two branches, the Searches and the Knowals. The former, retaining the spirit of their ancestor, were perpetually searching after knowledge without ever thinking they had enough, pursuing always the useful rather than the curious or regarding the latter only as it might be made subservient to the former. Diffident of their understanding they examined their premisses carefully before they built upon them, and submitted their deductions to a review upon proper occasions: and though despairing of absolute certainty in any thing, they wanted not moral assurance to keep them steady in following the best lights of their judgment. In their intercourse with others they were docible, humble, and modest, willing to learn of any body, and ready to communicate what they had were it ever so small: desirous of reputation only as it might gain them the better hearing, wishing to be believed no further than as they could offer reasons convincing to the hearer: lovers of unity and reconcilement rather than opposition, striving to interpret a different opinion so as to bring

it compatible with their own rather than to overthrow it.

On the contrary, the Knowals, confident in their abilities, soon thought themselves masters of whatever they undertook: they scorned to examine their principles minutely as betraying a want of genius and penetration, so they commonly took up their tenets at hap-hazard, and then pleased themselves with showing how dexterously they could maintain them: more solicitous to gain the applause than promote the benefit of mankind: assuming, peremptory and overbearing, proving every thing by demonstration, or expecting their word should be taken in lieu of demonstration: impatient of contradiction themselves and delighted to overthrow all who but seemed to differ from them. This branch produced the Sophists of Greece, the Academics of after times who would maintain the pro and con upon any subject proposed, the schoolmen and popish doctors in the dark ages of Christianity. According to the humour of the times they lived in, they would bragg being skilful in all arts whatever, even to making the shoes upon their feet and ring upon their finger; or of running ye off two hundred lines while they stood upon one leg; or of writing a gallop and furnishing sheets for the press faster than they could be printed off. In modern days there have been two off-sets sprung

sprung out from them: the Methodists, who pretend to know the secrets of Heaven and deliver all their fancies with a Thus saith the Lord: and the Freethinkers, who though sole masters of reason, do not use it for the information of mankind but only to pick holes in the works of others, and if they can make themselves laugh esteem it the same as making an adversary submit.

The Search branch, not fond of putting themselves forward, have scarce ever composed a visible Church, but lie dispersed up and down minding their own business quietly according to their several talents and stations. To this branch belong those who have made any real improvement, not only in philosophy, but in any art or science conducive to the benefit of mankind, and those who, wanting ability to strike out improvements of their own, endeavour fairly to understand and make a good use of those imparted to them by others. For many of the Searches have very moderate parts, but then they do the best that is to be done with them: on the other hand we often find shining talents among the Knowals, but then they seek no more than to shine with them, and it is well if they do not turn them to mischievous purposes.

9. As I was a Search myself it is natural for me to favour my own relations, and I need

not use flattery to persuade you of your being one: for it is not brightness of parts nor extensiveness of learning, but an honest, industrious temper, a cautious freedom of enquiry, a sobriety of mind, and humility of disposition, that characterize our line. If I had found no other mark I should have known you for a true Search by the pliableness of your neck. The Knowals have a wonderful stiffness in the vertebræ, therefore they judge of their size by the noise they make, and having most of them pretty loud voices they despise the rest of us as so many pygmies. Pray now did not you fancy yourself bigger than you are before I made you thrust out a head to look? Very true, says I, and I wondered how such a shrimp as you could drag about such a great carcase as mine: but that was not the first time I have found the benefit of retrospection. When I first set out to pursue the Light of Nature, I thought myself a stout fellow capable of mighty things, till having thrust out half my body and surveyed my person exclusive of the cloathing, I found it strangely dwindled into a button.—If you can contrive, says he, to work a few golden threads into your button it will be better worth than a bladder full of air.

But to speak my mind freely, you have worked up your button in a manner not very suitable

suitable to my taste: you have a great many more flights than ever I pretended to. I should never have thought of likening the human machine sometimes to a mill, sometimes to a study hung round with bells, sometimes to a chamber organ; nor of proving by a chess-board that the sphere of a spirit's presence is wide enough to contain sixty four particles of matter, nor of computing the corpuscles of light in a grain of wax, or absolute pressure of ether upon a guinea: much less should I have ventured to introduce Hatchet the carpenter, or the cook making plumb pudding into a metaphysical discourse, or bring a cat to assist in an optical experiment. Therefore I told you before that you have some resemblance mixed with a great deal of diversity: but whatever other features you have, since I discern the attentive praying eye, the modest brow, the serenely serious countenance, and flexible neck, of the Searches, and find you here in the helpless condition of a new-born babe, it raises a kind of paternal instinct towards you.—And I, says I, feel myself possessed with a filial reverence and dependance. I begin to wish I had not taken notice of your annexing the faculty of thinking to a system of matter, I am afraid you think me an ungracious boy, but indeed it was nothing but my zeal to defend the spirituality of the mind, which that posi-

tion

tion of yours had been employed to overthrow, that drew me in to contradict you.—Oh! says he, you need no apologies: we Searches are the last people in both worlds to take offence at any body for differing from us. As we desire nothing but truth, whatever liberties are taken with us out of an honest regard to that, if they do not convince neither do they displease us. I assure you I do not think a whit the worse of you upon that account, nor for your battling my doctrine of consciousness and the uneasiness of desire. I see plainly you did not go out of your way to meddle with me nor dispute in the Knowal spirit of opposition and rivalship, by the pains you take to explain the forbearance and continuance of action, and to distinguish between want and desire, so as that we might both retain our opinions consistently with each other.

Neither do I absolutely blame you for your sallies of imagination, for I know every one must follow the bent of his genius; to do otherwise would be like dancing in fetters: but I doubt you have been dabbling with the French and Italian authors. Take care you do not catch the grimace and levity of the one, the quaintness and marvellous of the others.—Thank you, Pappa, says I, for your kind advice. As to the French and Italians I never had much notion of them; I endeavour rather

rather to take my taste in matters of humour from our cousin Addison. But I cannot yet be quite out of conceit with my flightiness, because but for that perhaps I had not enjoyed the pleasure of your conversation here, nor ever seen that lion's face of yours, which first made me a spokesman in this vehicular language. Besides, if I remember right, many of our ancestors have soared upon eagle's wings before now. Your great uncle Plato gives large scope to imagination, especially in his Phædrus and Timæus, and introduces images as low as the carpenter, the cook, or the cat, in many of his dialogues. Nay, I have been told by Prince Maurice's parrot, who you know deserves credit, being a rational animal, that you yourself were not utterly averse to the familiar and the marvellous.—You are a saucy Jack, says he, smiling, to come over me thus with my parrot. But I related no more than I believed myself: you tell stories that no mortal can believe.—So did uncle Esop, says I, Hesiod, Homer, and even great grandpappa himself when he talked of his golden thigh, and having fought Menelaus at the Trojan war.

10. But, continued I, though I suppose the true reason of my blending the serious and the trifling, the useful and the curious, might be the turn of my imagination drawing me

so to do, yet with submission I seem to have found a good reason to justify me in following the bias. You know every thing is not proper to be said to every body, therefore our predecessors had their esoterics and exoterics, and delivering their lectures by word of mouth, adapted their discourses to their audience: but we moderns, having no other channel to convey our thoughts than the press, cannot pick and choose our company, but must pour out meat and milk into the same dish; leaving it to the men and the babes to help themselves, by which means some of the latter might swallow viands that would not only offend their palates but might really prejudice them in their healths. Now if we can cook up our messes of both sorts in such Frenchifyed manner as that the eye cannot presently distinguish which is which, our guests must cull and carve for themselves, and taste before they eat, each taking what suits his palate and digestion, looking upon the hard and odd tasted bits as intended only for garnish of the dish. I have said so much in recommendation of virtue, that I hope nobody believes I ever intended to lessen her influence in the least, but as the same observations seem to weaken it in the minds of some, which tend to establish it more firmly in those of others, I endeavour to mingle jest and earnest,

speculation

speculation and argument, promiscuously, wishing that one man might take me in jest in those very places where another understands me in sober sadness. Therefore, if any body finds any thing that appears to overthrow the common rules of religion or morality, let him suppose that I am only amusing the speculative, or that he does not comprehend my drift; or that I have no other than to exercise my talents, or show how dexterously I can walk in slippery places, or any thing rather than he should mind me seriously.—Well, says he, I can absolve you for your uprightness of intention, and honest care to avoid hurting the scrupulous. Perhaps I might have taken the like method had I had a more lively vein of fancy; but then I should have studied to imitate our progenitors, who were never superficial though they sometimes showed a sparkling outside. When they talked the most familiarly, it was to gain the readier attention to some important truths. If they introduced coarse and vulgar images, there was always some valuable substance within. While they seemed only to set their hearers agape with an idle story of a cock and a bull, they would slily steal in some solid reflection one might be glad to remember. They were wanton with discretion, and careless by design. There-

fore I will not enjoin you against following their example, provided you follow it throughout: do not trifle for trifling sake, nor unless you have some good purpose to attain by it.——If my execution, says I, shall prove answerable to my design, I dare undertake to satisfy you: but I can promise only for my endeavours, the success is not in my power.

11. But that I may not degenerate from the worthy ancestors you tell me I am descended from, let me give way to the inquisitive temper of the Searches who want to be informed of every particular they think worth enquiry. And since I have learned from you to seek for knowledge from contemplation of the phenomena exhibited, give me leave to ask some questions concerning those I have already experienced. I found an easy passage from the other world, one momentary pang I felt upon the breaking of some vessel in my head, but afterwards my senses retired still further and further inward until I lost them quite without pain or uneasiness. Pray, is the stroke of death always so gentle, or was I favoured in a particular manner? I have read in grave authors that the soul cannot be torn from the body without more pungent anguish than drawing all the teeth from one's jaws or

tearing

tearing the skin from one's flesh: and the poets describe the gates of death as surrounded with terrors, pains, regrets, and despondencies.—Prithee, says my patron, do not mind either of those gentlemen; they pronounce confidently upon things they know nothing of: but you must distinguish between the gates of death and the avenues leading thereto. Men are generally brought to their end by some violent distemper or grievous wound or bruise, and these are certainly painful, but so are they to those who recover from them. —I remember, says I, to have heard an eminent physician, now with you, say, that a man who recovers from a bad fever suffers more than him that dies of it.—The doctor, says he, was in the right: for it is the struggle between nature and the disease that makes the pain; when either ceases to resist, the patient finds ease. It requires as much vigor in the organs of sensation to give pain as pleasure, and when they have lost their tone, they can excite neither. The same may be said of those of reflection, for when imagination is become stupified it can no more exhibit ideas of terror and melancholy than it can those of joy and content. As for the convulsions called the agonies of death, they are merely mechanical, not expressions of uneasiness, but like the twitchings we sometimes feel in our limbs,

limbs, or habits men get of cutting faces. Therefore, whoever has gone through a painful, dangerous distemper, and given himself over as past recovery, knows the worst: nor has death itself, abstracted from the harbingers of it any thing terrible.—I am glad to hear you say so, says I, for the sake of those who are to take the same passage after me.

12. But how came I among that river of stones? what are they, and who threw them at me so violently?—Upon quitting your vital hold, says he, which you might have done at any time before, but for want of knowing what kind of action to exert, for you know we can do nothing without an idea of the thing we are to do, your body, carried along by the Earth's motion, left you behind: while the nocturnal shadow protected you, you remained insensible and quiet, but that soon departing too exposed you to the rays of light, which follow one another in several lines, leaving large spaces between, and you being of very light substance, they only shoved you gently from one line to another by very oblique strokes, which gave you those brushes you first felt and awakened your ideas; until upon thrusting your arms directly into the stream, they buffeted you about in the manner I found you. So the streams you complain of, are no other than the corpuscles

of

of light, darted incessantly from the Sun and Stars.—Nay, now, Pappa, says I, you treat me like a child indeed. Am I to swallow this, or is it an esoteric, that we babes are to take for garnish of the dish? Sure the light of this country must be a vastly grosser element than ours in old England: instead of being fit to enter the tender tunicles of the eye without hurting, it is enough to knock out one's brains. I am sure I found no colours, nor any thing but bumps, and bangs, amid the bright effulgence poured round me. —You forget, says he, your own doctrine, that all magnitude is relative. The light here is the very same with that below, but you are not the man you was. You are but an atom in respect of your former body, and that makes you think the corpuscles of light so much bigger, by comparison with yourself.—Truly, says I, I seem to myself a good proper sized person: what though I am but a bag and not a man, methinks, I could hold two good Winchester bushels of corn, without bursting.—No no, says he, little gentleman, thousands such as you, might creep into a single grain. But your present composition being much finer than your former, that which before was the object of vision, becomes now an object of touch. ——Touch, indeed, quoth I, with a witness! if we have nothing softer to

to touch I shall never desire to use my fingers again as long as I am a vehicle.

13. Since then, continued I, we can only feel the light, how come we to see one another so plainly? Is ether such a jack of all trades as to serve for light, and sound, and every thing?—Our ether, says he, contains various mixtures, though you folks below use to call it all by one general name, because you cannot distinguish them. And so you do water and air, yet you may know by the different tastes and sediments of the clearest waters, and the substances extracted from them by chymistry, that they are not homogeneous. The same you may know of air, by the clouds, vapours, lightnings, and meteors formed there, by the dust falling upon your furniture, the concretions gathering upon tops of walls and bark of trees. In like manner ether consists of many dissimilar fluids respectively performing the office of light, sounds, flavours, odours, and objects of other senses you know nothing of. It supplies us likewise with a pabulum for our sustenance. Will you taste it? I think you look a little faintish as if you wanted refreshment.—Now you put it in my head, says I, I do find myself very hungry, though I was so busy in attending to you, I did not perceive it before.—Come, says he, put out an arm at one end of your

your vehicle for me to pull you along, for our pasture does not grow everywhere, it comes from the tails of comets, dispersed up and down in long gleams throughout the vortices. I know of a very good layer about a hundred miles off; we shall be there in an instant.---No sooner said than done: he set me down in the stream, and bid me open my mouths, but not gape so wide as I had done before.---But, says I, may'nt I overeat myself? Now I have left my old cravings behind, I should be sorry to let any new ones get the better of me.—Never fear, says he, you will contract no vices here, if you have not brought any with you.—Upon opening my lips I found a delicious clamminess hang about my tongues and palates, and though I could not swallow, I felt it insinuate into my pores, as the vivifying spirit of air does into a man's lungs, and refresh me prodigiously. As soon as I had enough it would cling no longer, but I perceived my mouths empty.—Well, says Locke, how do you like our celestial ambrosia?—Charmingly, quoth I. It is better than all the sauces of a French cook; better than venison, turtle, or even than a slice of good mutton after a whole morning's air and exercise; and which is best of all to a Search, one may indulge freely without danger of excess.

14. We

14. We came back as quick as we went, and I, all life and spirits, without any of that heat or listlessness usual upon a plentiful meal of earthly cates, began to throw my legs and arms about and exercise all my faculties with more dexterity and alertness than I had done yet. I was so pleased with my pastime that I could not help crying out, Methinks I perform a multitude of feats for such a little fellow; I like this agile body hugely: it is a thousand times better than that great clumsy carcase I was stifled up in upon earth.

But if I am really the minute insect you would persuade me, thousands of whom might creep into a grain of corn, how is there room for that variety of parts I contain? I have arms, and legs, and eyes, and ears, and mouths all around me, every one of these must have muscles and fibres to move them, besides organs of reflection, vocal fibres, and those numberless springs, composing the velvet nap in my inside, by which I move every thing else.———You forget again, says he, your chapter upon the divisibility of matter, and that the smallest conceivable particle may contain as great a variety of works as the whole human machinery. But you multiply the parts of your composition too fast: do not you know that all matter is homogeneous, and the secondary qualities of compounds result

result from their form? The same texture may form an eye, or an ear, or any other organ, according as the threads of it are variously disposed, provided the agent have a command over every particular thread to hold it in what posture he thinks proper. We have a little mixture of flesh with vessels fitted for vital circulation, carried on mechanically, but this is very little in proportion to our system of sensory and motory nerves, which lying within a small compass, our spirit, bearing as large a share in our whole composition as our body, is present throughout the greatest part of them, and operates almost immediately without that long string of channels beyond one another, propagating motion to the human members.

Not that you have acquired any new instruments of action upon coming hither, for you had all you now possess before you left your terrestrial mansion, but the gross veils encompassing you there were an impediment to your functions: all the velvet springs that did not communicate with some nerve of your outer frame being wholly useless to you. Upon being delivered from our corporeal manacles, we have the command of every part belonging to us as soon as we have learnt the ready use of them by competent practice. You shall see me now throw myself into a

variety of shapes to satisfy you of what I say.—At this word he played all the pranks of a Proteus, first a man, then a horse, an eagle, a dolphin, a serpent, a stream of water, a flame of fire, a Briareus, an Argos, a Virgilian Fame, a polypus.—Upon my word, says I, this is very pretty sport: you can never want divertisement, being such a nation of Harlequins.—We do not amuse ourselves with these gambols, says he, we have something else to do: I only played them now to show you what you are capable of.

We have another slight of hand we are more fond of practising: we have our imagination as perfectly under command as our limbs, so can raise passions and desires of any sort we find expedient. Passion you know assists greatly in the exertion of activity, and you have found a secret unknown to former moralists, that happiness consists chiefly in the gratification of desire: therefore it may be said of passion and desire, as of fire and water, that they are excellent servants, but very bad masters. We never let them get the mastery over us; as we take them up we can lay them down again the moment we please, so to adopt your distinction, never have any wants though we abound in desires.—O, charming! cries I, this is a most desirable accomplishment. Pray, dear good father

father and tutor, cannot you instruct me in this art? I had rather you would begin to teach me this than put me in the way of exerting those new senses you spoke of.

15. You will not have time, replied he, to make much progress: it is a difficult lesson, not to be learned presently. As to more senses, you have enow already: the two of sight and hearing, together with the vocal language you have acquired, will suffice for all you have to do during your short stay among us.—— Alas! alas! cries I. Now you strike me quite down. What, then! Am I to be snatched away from this new life in my cradle? I was in hopes I was settled here for two or three thousand years at least.—— I tell you, says my tutor, You are not come now to reside among us, but only upon a visit, in order to carry back an idea of this place and people to your countrymen. It will not be many years before we shall have you here again to take up your abode among us, and the manner of it will depend very much upon your conduct below. Possess your mind with becoming sentiments of that power who presides over both worlds, and do all the good you can to your fellow-creatures: no matter how small your powers be, the part you are to act is of divine appointment, it is your bu-

siness to act it well. Endeavour what you can towards moderating your passions, and bending desire to the ply of reason: it will make you apter to learn that science when you come here again. We have many regions in this country: perhaps upon your return you may not find every thing just as you have seen it now, nor may I be in the way to assist you: but wherever you fall, if you come rightly prepared, God will find you a protector, and a commodious habitation, fitted for a life of happiness.—I listened attentively to his advice, hoped to retain it strongly in memory, and that the idea he had already given me of things here would instigate me to follow it. And am I then, says I, to travel back the irremeable way? I thought nature had opposed indissoluble bars against the return of a departed soul to its old habitation.——Your present journey, says he, is supernatural, so being out of the course of nature, I will not pretend to account for it. The like has never happened within my remembrance nor that of any I have conversed with. That stroke you felt in your head was not a real apoplexy, for your body lies below as sound and entire as before you fell asleep, without rupture or disorder in any of its vessels, still performing its vital circulations and secretions,

secretions, though destitute of all thought and sensation.

16. And you came here differently accoutred from other travellers, for you have brought away your memory and imagination along with you; not that they have not the tablets of those faculties too, but without any writing or figures whatsoever upon them; all their old traces, their science, their sentiments, their habits, their desires, their experience, and in general their ideas, totally effaced: so they come into this world as much a blank paper as ever they were born into the last, ignorant and helpless, and having every thing to learn. Sensation begins the fresh writing upon them, from whence grow ideas of reflection running into combinations and associations, generating comparisons, distinctions, and relations, and at length forming judgment and understanding: thus they rise to knowledge slowly and gradually, in the manner they did in their former state. Some or other of us are constantly near at hand ready to undertake their nurture, to lead them into the ambrosial streams as they have occasion, to assist in opening their new faculties, and instil instruction into them as they can receive it.—With your leave, says I, good master, I would beg your information concerning two difficulties that occur upon this

this theory of the blank paper. One is, how you can remember what you knew below so well as I find you do: the other, how your condition here can be affected by your former deportment, if you leave all your old sentiments, habits, and passions, behind you. Is there any judicature to assign your several fortunes according to your merits.

17. He replied, let us consider your difficulties one at a time: but we will begin with the last, because that may help to explain the former. We receive not our portions by the decision of any visible judicature, but all things fall out among us according to the operation of natural causes: nevertheless, we know that nature does not work by chance, but her courses are established in wisdom and justice, so as by a chain of inevitable consequences to answer the purpose of a strict and impartial judicature. Our vehicles, by lying so long enclosed in human bodies, receive a change in their texture from the continual action thereof, so that we come out diversly modified with different talents, natural parts and genius, according to the way of life we had followed before; we leave indeed all our old acquisition behind, but bring with us a particular aptness to make new ones similar to those we possessed before. The laws of nature are so provided, that vice weakens the animal

animal powers, distorts the mental organs, and introduces particles of gross matter into the delicate body, which give racking pains and cause grievous disorders of mind. Whereas the practice of virtue strengthens the constitution, purifies the faculties, and gives a happy facility to acquire the same virtues again. As no man is perfectly virtuous, none arrives here without a mixture of terrene concretion, which proves very troublesome and a hindrance to his operations. In some it is so deeply infixed as never to be moved, so we are forced to abandon those poor wretches to misery and despair: the rest furnish us with a great part of our employment to clear them of their obstructions, which requires much time and pains, the more or less of both and attended with the greater or less inconvenience to them in the mean while according to the degrees of foulness they have contracted. Thus every man receives the just reward or punishment of his actions by the ministry of second causes without needing a formal trial and judgment.

18. To come now to your other difficulty: it is easy to comprehend from what has been said upon the first, that we may know by the condition a new comer appears in, what have been his courses of behaviour, his way of living, the company he has consorted, or objects

jects he has conversed with, and consequently the particular country he came from supplying him with them: and by tracing back our own residence in like manner we may discover who has been our relation, our friend or our compatriot. You may suppose likewise that ether being extremely voluble and elastic, not a dust can stir upon earth but must affect its vibrations and disposition of its particles here: and we, having a very piercing sight to discern the minutest objects together with a great readiness at investigating causes from effects, can read in the situation of the fluids composing ether all that passes or has passed below. But as I doubt it will be difficult to make you sensible how we can do this, I shall pass on to another method you may more easily comprehend. You remember I told you of our sentient language, wherein, by withdrawing our own ideas, we can perceive those arising in any other vehicle applied close to our side: now we can do the same with respect to living men, for by applying ourselves close to their sensories, though their coats being thicker they would hear nothing of us if we were to speak to them, yet we can discern all they know or remember or think on. We are not very fond of this employment, the sublunary air being not agreable to us, but some of us go down from time

time to time to bring accounts for the benefit of the rest. As other vehicles have played the same game with us formerly while we were alive, they can inform us of particulars happening or relating to ourselves which we had utterly forgotten. And thus I may be said to remember occurrencies I am not conscious of, as you could remember the transactions of ancient times which you had read in some history. When you come to converse with our people you will find that, notwithstanding their coming here a mere blank paper, they have since got written upon it an exact memorial of their past life and conversation.

19. I readily apprehend, says I, this last method of recovering your former traces, though I cannot say the same of the other two. But if these new-born vehicles advance so slowly in their learning, how came I to make such a rapid progress as I seem to have done? You do not consider, says he, you brought your imagination with you and old stock of ideas, so had little more to do. I needed only lead you to the exertion of your new senses, you had judgments and reflections in store, by which you could make use of their notices; only bring you to your voice, for you had matter ready for utterance as soon as you could pronounce it. And let me tell

you

you your progress has been more rapid than you think of. How long do you imagine you have been among us?——Why, I cannot tell exactly, says I, having observed no distinction of days and nights: but by the many trials I made before I could get the tolerable management of my faculties, and the many lectures you have favoured me with, I should guess myself about a fortnight or three weeks old.——What sort of time, says he, do you reckon by?——Time! says I. I do not understand you: I know but one sort wherein sixty minutes go to an hour, and twenty four hours to a day.——Ay, but, says he, I mean celestial or sublunary time. You know, I have told you below, that we measure time by the succession of ideas: now our ideas here flow in so much quicker succession than those of heavy mortals upon earth, that we pass a great deal more time between sun and sun. The clocks you left at home have gone but one hour, forty two minutes and fourteen seconds, since I first found you boxing with the corpuscles of light.—Surprizing! says I. Now this ends another wonder of mine, that I never felt myself drowsy all this while.—No more would you, says he, if you where to stay ever so long. We never sleep, nor ever find the want of it.—Then, says I, how do you find employment for your time of

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which you have so much more than other people? Does it never hang heavy upon your hands?

20. Never in the least, says he. We have an inexhaustible variety of employments: when we have enough of one, we find others ready at hand to which we can turn with fresh relish: you do not know what a field we have to expatiate in. There is the nurture and education of our adopted families, the providing instruments to pick out the terrene concretion gotten into them: these we procure from the planetary systems, for you know that Newton tells you, that air is an extract of little particles from the most solid bodies, so it furnishes us with fine spiculæ of steel, silver, gold or any other hard substance we want. The dividing the ambrosial streams to disperse them about more equally, as you disperse your New River water for the uses of the several quarters of the town. The journies down to earth, to learn what passes there. Studying or practising that art of reading I mentioned before, by the disposition of ethereal fluids, and investigation of causes from effects. Observing one another's talents and characters, which we may call the knowledge of the world. Purifying ourselves from any fæces remaing within us, or removing any new concretions that might gather: for

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we have the seeds of diseases among us, though we suffer none of them to grow, because we can expel them almost as easily as you could have washed the soil off your body. Besides the benefit of conversation by our sentient language, wherein we can mutually impart and receive information of all kinds, and from all quarters, with the greatest readiness and precision. Then we can travel with incredible swiftness to distant regions of the world, follow the motions of the heavenly bodies, study the systems of nature and œconomy of Providence, and from thence rise to the Divine Attributes: which let me tell you afford larger scope for contemplation and delightful wonder than I can explain to you in a manner suitable to your conception.

These are noble occupations well worthy the attention of a rational creature, and copious enough in their several branches to engage our attention incessantly: if we had any vacancies, we should not want means of filling them up with divertisement, for we could gather materials of all sorts from the several atmospheres, and as those little particles, which repel so strongly at a small distance, would cohere as strongly if brought into contact, we might practise the mechanic arts, fabricate various machines, and weave curious tex-

tures

tures of our entertainment; but we have no use for those things, and no leisure to throw away upon trifles. Add to this, the great agility and pliancy of our bodies, of which I have given you ocular demonstration, and our absolute command over desire. We have none of that sullenness and perverseness which often sets you mortals against things in themselves agreeable: on the contrary, we can turn desire on the most insipid objects or make those pleasant which naturally had nothing alluring, upon proper occasion, if nothing more inviting or important should offer. I was as much pleased in running through those metamorphoses I showed you a little while ago, as you could be in the novelty of the sight and could this instant, if there were good reason for it, apply as eagerly to a game at push pin, as any child of four years old. With all these advantages you may well conceive we have work enough before us to take up an eternity without weariness or satiety.

21. What then, says I, are you to live for ever in this vehicular state? Not so, answered he, we are longevous but not eternal: yet we reckon ourselves immortal because we do not look upon our departure as a death. We have not all the same length of life allotted to us, some depart sooner, others later, but we all

all wear out our natural terms, having neither diseases nor wounds nor destructive accidents among us; for the threads of our texture, though extremely pliable, are of so tough a nature that nothing can break them: when the appointed time comes, our vehicles, worn thin by age in some particular part, suddenly burst and let loose the enclosed spirit. Those who have gone through the most arduous and painful trials below commonly go first: next to them such as have died before their birth or in their tender infancy: but none were ever known to be advanced, for so we term our departure, before they have entirely purged themselves from all remains of their terrene concretions. By our thorough insight into nature, we know assuredly that there is still a third world beyond this, a world of purer love, stricter harmony, higher capacities, and more exhalted happiness, than we now possess, replete with spiritual substance wherein we shall be absorbed: therefore, instead of condoling, we congratulate one another upon discovering signs of an approaching dissolution. Nevertheless, being so amply provided here, we live perfectly well satisfied with our present condition, content to stay here for ever if it so pleased God, yet desirous and glad to be advanced upon receiving the summons to a higher station.

22. You

22. You give me, says I, a most inviting description of your situation and way of life: methinks it is worth any pains I can take, for the time I am still to grovel upon the earth below, to fit myself for a state so abounding in sources of present enjoyment, with such glorious expectations beyond. But since you have mentioned conversation as one of your principal amusements, pray where do you find your company? I suppose they gather together in cities, and we are here in some remote desart, out of the way of any road, for I have not seen a soul besides yourself since I could use my eyes. That is, says he, because you have not made the full use of them. Put me out twenty now all on one side, and direct them upon the same point: then look about ye and observe what you can see. Oh! now I see, says I, a multitude of long lank bags flitting by me like shadows: but they all go the same way. Have they any wings? for I protest I cannot discern. They whisk along so nimbly I cannot get a distinct view of them. And now I recollect, when you carried me to the ambrosial fountain, you kept kicking behind you all the way, like a dab-chick in diving, with a pair of sprawling legs, one on each side of me. But I cannot guess what you did with them; for though I can sprawl out legs too, I feel neither

neither ground to tread on, nor water to push against, and I am afraid to stretch them out too far, for fear of those plaugy rays of light knocking against my shins.

Those very rays, says he, so formidable to you, are the springs to convey us on all our journeys. Do not you know that in mills, watches, and other complicated machines, one power is made to produce various movements? The stream, for instance, driving a throwing mill, runs always directly forward one way, yet the artist finds means of turning this force laterally or obliquely, or circularly, upon any of the works. In like manner we make a more simple machine of ourselves, for thrusting a leg against some corpuscle of light, we take any momentum we please therefrom, and any direction within the compass of a quadrant. You are sensible it is expedient for our speed that we should take a very oblique direction, making as small an angle as possible with the line of the ray: but as this must still throw us away from it, in time, we quickly find another ray on our other side, from whence we take with another leg a direction equally oblique, but turned the contrary way. Thus we pass along between two rays, one for right foot, and the other for left, much in the same manner as a Dutchman skating upon the ice. Our motion indeed

deed is a little serpentine, but the rays being no more than one thousandth of an inch apart, and we going about ten miles at a step when we are in haste, this small undulation may well pass for a right line. As the ether makes resistance against our light bodies, we throw out lenthways in the form of worms when we go forwards, and draw ourselves out dish fashion when we would stop.—Oh pretty! says I. Be so kind as teach me to skate a little. I am loth to give you the trouble of lugging me always about, like a beggar's brat.—Be content, says he, since I do not grudge the trouble. Think with yourself how much time and dexterity is requisite to practise this art: for we must give our touches with the nicest exactness imaginable, the least mistake would carry us out of our course, or throw us into the middle of those streams you found so troublesome. Therefore, this is the last thing we learn to be perfect in: there are some among us have been here these two hundred years, and can scarce waddle yet

Those who were bigots below, being always used to leading strings, come on very slowly: they will let us carry them about where we please, and tell them any thing, but it is the hardest matter in the world to get them to help themselves, or try to find their

feet. On the other hand, the Knowals will not submit to be shewn any thing, so they kick and cuff about at random, and get themselves tossed from ray to ray, without ever learning a step. It is well our vehicular flesh is of so healing a temper, or they would be beaten to mummies before they had made any progress. —Ay but, quoth I, you do not consider what an apt child I am, having brought my imagination and memory entire with me. Besides, as I am a Search, I shall have the benefit of my own reason and other people's experience too. —No, no, says he, I tell you the difficulty and danger of the attempt is greater than you apprehend.—Are there no go-carts in this country? quoth I. Do, nurse Locke, get me one if there is such a thing to be had. You understand the mechanic arts, and are there no wooden particles in the air of which you might make me a pretty one now? I would willingly learn to creep if I cannot run.—Prithee, child, says he, be patient: I never knew a Search urge things so pressingly before. Besides there is another art necessary to qualify you for practising this: if you were now to take a strong impulse with your foot, you would find yourself doubled in like a night-cap, and your knee driven through your body, would bump up against your head; therefore when we go to receive a stroke, we

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at the same time give a rigidness to every fibre of our vehicle, which makes us compact like a body of steel, and the whole of us moves together.

I beg pardon, says I, for my eagerness: but if I must not think of the practice, may not I wish to understand the theory of your motions? I took notice before that all the travellers I saw were passing the same way, and as the rays keep continually flowing from the Sun, I can easily comprehend how you may skate along them, quite to the regions of the comets: but how do you contrive to get back again? Can you strive against the stream, or sail like a ship with the wind before the mast? —There is no occasion, says he, for we never want favourable gales which way soever we are bound. Do not you consider that there flow rays from the stars too as well as from the sun, and as they come in all directions we never fail to find some or other of them that fit our purpose to a hair.—But then, says I, you must go very slow, for their feeble impulse cannot carry you near so fast as the vigorous solar rays.—Pardon me there, says he: you know the inert force of matter by which a body would move on for ever with the same swiftness, unless stopped by something else; therefore these transverse rays do not abate at all of their pace for their immense distance

from the star whereout they issued. You below see the sun brighter than any other luminary, because more of its rays enter your eye together, but each ray taken singly, whether of solar, or stellar, or culinary light, moves with the same strength and velocity. Indeed the stellar rays being wider asunder, make our path a little more serpentine, and our progress slower, but this is a trifling difference not worth taking notice of: and we are obliged to be a little more circumspect in crossing the sun's rays, that we do not dash against them. He then drew me a little aside to a place where I could see travellers hasting several ways by help of different rays: and it delighted me to admire how, though they went at a prodigious rate, they managed with such amazing dexterity as never to touch the crossing streams of light, nor jostle one another.

23. While I was entertaining myself with this spectacle, I heard my friend call out with a loud voice that almost stunned me. Holla! here we are. Presently there came up a vehicle that stood and stared at me wistfully as I did at him again: he then entered into close conference with Locke in the sentient language; after which he surveyed me a second time from top to toe, and having perused me as much as he liked, I saw him strike

strike his foot against a solar ray, which wafted him over to a stellar, from whence he took a direction almost at right angles with the former, and was instantly gone out of sight. Pray, says I, who might that very curious gentleman be? He should be a Search by his prying eye, but methinks he looks like a weak brother. He examined me all over so strictly, that if I had not heard you call to him, I should have suspected he had some design upon us.—So he has, says Locke, but no bad one. You cannot know his face, he having been dead above a thousand years ago, but you have read his compositions. He is Aulus Gellius, author, or rather collector of the Attic night's entertainment; for having a very moderate capacity, he could produce little of his own, but made it his business to pick up and gather the scraps of his oracle Favorinus: however, as he was a diligent honest creature, we acknowledge him for one of our line. You find him often quoted by the learned, for though his writings contain nothing of much importance, yet such minute matters as he has recorded are sometimes turned to good use by others.—I am glad of that, says I, for the sake of my microscope: for if I am not useful myself, I may be the cause of other people's being useful.—As industry and exactness, continued he, are his talents,

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we put him upon employments here wherein those qualities only are requisite. He is now gone down to earth, upon an errand of that sort for you.—I thank him kindly, says I: but what service can he do me there? He cannot carry news of me to my family, for you told me you could not make your sentient language understood by the living.—No, says Locke, it is a business relating to your own proper person. You have now no intercourse with your body, so can leave no traces there of all you do or see: now he is gone to engrave traces of every particular in your sensory with a fine pencil or style he will pick out of the air as he goes along; for else when you awoke you would think you had slept sound all night, without any thing extraordinary happening to you. I gave him an exact account just now of all that has passed hitherto, and shall take care to send down intelligence from time to time of what further shall fall in our way.—I hope, says I, you will suppress what we have just said of the gentleman: he might have reason to take it amiss that we have spoken so freely of his character and performances, especially at the very time when he is doing us a friendly office.—Never disturb yourself about that, says my patron: we have none of that vanity clinging more or less to all mortals,

mortals, and which is the first speck of terrene concretion we endeavour to pick out of them, as being the most troublesome. We value ourselves here not upon our talents but the application of them: natural infirmity and shallowness of capacity are no disgraces among us, therefore he is not ashamed of having them, nor will be offended with us for taking notice of them. So I shall suppress nothing, neither will he, but you will find a compleater narrative of your journey than if you had pen, ink, and paper, to set down every thing as you go along.—That pleases me much, replied I, for I would not lose a tittle of all the very remarkable occurrences befalling me here.

24. But with your good leave, Master, I would beg your explanation of one or two particulars relating to this errand of my cousin Gellius. As I have my memory with me, and actually remember all that has passed since my arrival, cannot I recollect it again when I go back without troubling my cousin to write it down for me? Then if I have brought away the tablet of my memory, what is there left for him to write upon? And how can you, or any body, send him intelligence of my private thoughts?—I will tell you, says he, how the case stands. The human memory consists of several membranes lined

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one within another: the innermost are softest and quickest to take impressions; the outer are tougher and more retentive. The former serve you for common occasions, as in ordinary discourse, where you only want just to remember what was said last till you have given a proper answer, and then forget it again instantly. This membrane being extremely pliant, conforms readily to the impressions in the others, which enables you to recollect things recorded there many years ago. Now you have gotten only the innermost pellicle of all here, which answers your purpose well enough, while there is no outer stamp to press upon it; but when you come to have it squeezed again into your old sensory, your present traces would be quite smoothed out, like a rumpled muslin upon being ironed, and all you know now vanish like an idle tale, if your industrious friend were not to work correspondent channels, fitted exactly to receive them in the outer coats. So much for your two first objections; the third you must remove yourself, by telling me all your thoughts: we shall have time enough to send after him, for he is a little tedious in his motions, and scrupulously exact: I warrant ye now he will be puzzling about in the atmosphere a whole day of vehicular time, before he will find a style to his mind.

25. But

25. But I cannot trust to any narrative you will give me by voice, you may overlook or omit something; I must have it in the sentient language.—Lack-a-day! quoth I, you know very well I cannot talk a syllable in that.—I know very well, says he, on the contrary, that you cannot help talking if you would never so fain: the whole art here lies in the hearer, and you may trust me for that. Come, hold your head still, and put out a pair of ears below: I may have occasion to speak to you at intervals. So saying, he thrust out a couple of broad arms, or rather slappers, something like the tails of Turkey sheep, with which he muffled up my head all round, as with the hood of a great coat. I knew my business was only to ruminate on all that had passed in my thoughts from my first arrival, for he would feel the ideas as they rose. In this guise he held me some time, feeling and speaking alternately in a kind of dialogue, wherein himself was the sole talker, after the following manner.——Ay, but how did you feel yourself on first withdrawing from your body?——What were your first sensations on coming here?——What were your thoughts when you could hear me speak before you had gotten your voice?——Hay! Let's have that over again.——Well, now I have your history perfect enough. But I find

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you have some wishes you were shy of disclosing. Do not endeavour to conceal any thing from me, you know I am your friend: and besides, it would be in vain, for I should ferret you out.—Oh! you want to hear something of your relations: and your wife is uppermost in your thoughts.——I commend you however for thinking of your father and mother, though they came hither when you was a little baby, incapable of knowing them: and your guardian and the others who took care of your education. They are all among us, employed in ways suited to their respective characters and inclinations.—No, you cannot see them; they are all a vast way off, dispersed up and down in different regions, for having but lately attained the art of skating, they are gone to make themselves acquainted with the country.——Well, well, you shall hear more of your dearee presently. We seldom meet with husbands so anxious about their wives, unless now and then a Search that has happened to match with one of the same blood.——Nonpareil! Ay, so they are all, either the best or worst that ever man had.——Yes, yes, I know she was a Search: we all look upon her as such, and bear her a brotherly affection.——We had very little trouble with her, as she brought few terrene concretions, and those are in a great measure cleared

cleared away as she was very patient and desirous to have them removed. Having a soft hand and great tenderness of temper, we employ her in picking out the spots from prudes, demireps, and ladies of fashion who have lived in a continual round of genteel diversions, doing neither good nor harm.—— Ay, ay, she would come to see you with all her heart, but consider she is but seven years old in this world and has not yet learned to go. But what would you say now if I should carry you to visit her? She plies close to her picking trade with some of the finest aerial needles we can get for her, not above fifty thousand miles off, we may skate there easily upon a couple of rays of Spica Virginis in two hours vehicular time.—Nay, none of your coaxing and cajoling, your Pray Sirs, and Do Sirs: when I offer a thing, I do it readily without needing to be pressed.——He then unmuffled and let me go: I durst not speak before for fear of putting him out of humour, but now thought I might open, yet was forced to moderate my joy by his last rebuke. So believing a short speech was best, Thank ye, thank ye, says I, dear kind patron: she was the most agreeable if not the most valuable gift heaven bestowed upon me below, and this offer is the most acceptable I could have wished. You have taken pains for

for my good and instruction before, but this instance shows your benevolence here is tender and indulgent as well as judicious. I then presently stretched out an arm for him to take me by. Hold, hold, a moment, says he, till I give you some instructions for your conduct upon this visit.

26. We gave her an inkling some time ago of your coming to visit her in the shades like another Orpheus. Ever since she has taken it into her head to call herself Euridice, for we have our innocent fancies, allegories, and fables here as well as you mortals. We were willing to humour her, so she passes currently by that name and you must mind to call her by none other.—Oh! any thing, quoth I, that will please her best. Euridice! methinks it is a pretty name, and I am sure the real Euridice could not better deserve such a journey after her.—In the next place, says my instructor, she is not a woman here, so you must consider her as an intimate friend, not as a wife. Let us have no kissings nor embracings, no raptures nor transports: remember your own distinction between love and fondness, and what I have told you already that we are here all Isangeloi, therefore your love must be pure, sedate and angelical.—I will try my utmost, says I, to satisfy you, and hope to succeed the better

better because I always endeavoured below to make my love as refined and sentimental as posible. And indeed I found no great difficulty in the task, for she had so many angelic qualities when a woman, that she was fitted to captivate the understanding as well as the heart. But we waste time: two long hours seem a tedious while. He then took hold of my arm and we went on swimmingly, after the rate of forty thousand miles in a minute of Paul's clock. He clasped me fast round the wrist, nevertheless I clung round his too like a drowning man to a bough. I was in high spirits all the way, as you may suppose, more alert and joyful than on the morning of my wedding day, for in the lottery of marriage there is always a hazard, let a man take what care he can. I can give no account of all we met or passed by, for my whole thoughts were taken up with one object, so that I had not a glance to spare for any thing else. At length we stopped, and I beheld a vehicle intent on picking out the dross from another with a needle. My friend whispered something to it in the sentient language, when instantly there shot out the dear, well-known face, not that of the blooming bride which enchanted my youthful eyes, but that of the serenely chearful matron endeared by eighteen years, cohabitation, when

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we used to take sweet counsel together upon the measures of our conduct, the economy of our affairs, the education of our children; or remark to one another the growing seeds of sagacity appearing in their little contrivances and prattle as they played around us.

27. My dear, dear Euridice, says I, do I see that face once more which used to be a continual feast to mine eyes! expressive of a most amiable and valuable character within, innocence, sweetness, sincerity, constancy, penetration, judgment, discretion, affability, politeness, easiness, sprightliness: my pleasure at home and my credit abroad. I never knew what a happy life was till you taught it me, and have never felt it compleatly since your departure. Welcome, thrice welcome, says she, to these happy mansions, my sincerest, tenderest, truest, best beloved friend. How happy is it we can thus meet without reflection of having done any thing which might make one another unfit for this place! We lived in harmony and love, contented within ourselves, yet not forgetful of the duties we owed to others, delighted to please each other even in trifles without neglecting our more important concerns, enjoying the present moment, but careful to enjoy it in such manner as might leave no remorse behind.

hind.—Thanks to you, my Euridice, says, I, that I have no more to reflect upon with remorse. Your sprightly temper gave me spirits, enabling me to improve my faculties, and your innocent gaiety taught me to make some use of them, by rendering me more sociable and active. I hope to come here one day with the less terrene concretion, for having had the benefit of your company. You can scarce have brought any here, you were all innocence and unreserved goodness. And indeed I see by the serene satisfaction in your countenance, that you have nothing to trouble you. Oh! how charmingly different does it look from that I saw last in convulsions and agonies!

Name them not, my Search, says she: the avenues of death were grievous, beset with pains, restleness, and regrets, at leaving my husband and children: but they quickly end in a quiet sleep, from whence we awake to new life and enjoyment. Every thing is new to us, yet nothing appears strange, because we remember nothing of our former scenes. We soon discover that we are in a society, and it is not long before we learn to converse among them. By means of our sentient language, which your friend tells me you do not understand, we quickly receive information of what we have been, what we have done, and what

what we have gone through: and believe me, my Orphy, (your friend will permit me to call you so), the troubles we have undergone appear as nothing in comparison of the state they lead into. We have here an infinite variety of enjoyments, without any thing to disturb us except the dross we bring from below, and though the clearing it away be painful, we submit gladly for the greater suppleness of our limbs and command of our faculties we have upon getting rid of it. The people of this country are universally obliging and benevolent: every body is helpful to me, and I have the pleasure of being helpful to others. Though I am yet as a child, unable to stir, they carry me about wherever I desire, so I make visists more entertaining and improving than those merely harmless ones I used to make below: for instead of dress and trifle, the discourse runs upon the characters and occupations of the inhabitants here, the quickest and easiest methods of picking out terrene concretions, the intelligences continually received from earth, the creatures, productions, and histories, of the other planets; and in such an ample field we always find something new, interesting, and instructive. Your conversation has prepared me for a relish of the deeper sciences. I can attend to lectures of philosophy, upon the laws of nature, the

the courses of the planets, the various particles of air, the commixtures of ethereal fluids, the systems of Providence, and the glorious Attributes of God. O, Search! could you discern these Attributes as fully as they are discerned here, you would always fear but never be afraid of him, you would look upon his commands as advices kindly given for your interest, you would possess a sure and glowing hope which would prove a sheath to every natural evil and an effectual bar against every moral evil. But with all these engagements you may well think I have no temptations to the vapours, no vacant or insipid time; nor had I more than one thing to wish, and am thankful it is now granted me though but for a moment. Heaven send it may be granted me one time or other for a long, long continuance.

Amen, amen, says I, may we meet in such happiness as you have given me the idea of, never to part again. Your remembrance is my continual solace from morning to night: the image of my Riddy goes with me into company, attends me in business; entertains me in my walks and steals in upon my studies. Heaven made us the principal instruments of one another's happiness upon earth, and I think the prospect or even possibility of our being so again adds to my di-

ligence in the prosecution of those duties that lead to a better state. It was with that view, says she, I suggested the thought. You know I always wished your good most ardently and cordially: the same desire possesses me still, and directs me in employing the few moments we have together. While the thought of Riddy does you any real service, indulge it; but let it not interfere to interrupt you in any thing you ought to do. You call me yours, and I call you mine, but we were only lent, not given, to one another, as we now find by sad experience. Therefore your only chance of having the loan returned is by making yourself agreeable to the lender. For know, Orphy, that our works follow us, not indeed in themselves but in their certain consequences. We rise with different talents and capacities according as our little bodies have been formed and fashioned in the mould wherein they have lain enclosed. You cannot know directly what effect your outward actions will have upon the growing fœtus within you, but the same power which gave laws to man, established likewise those of nature, and has made them both so to correspond, that while you fulfil your duty, you will unknowingly furnish yourself with powers for your use and enjoyment hereafter. Therefore serve God

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by doing service to his creatures: endeavour to make such acquisitions as will be most useful to them, for those will be most useful to your own main purpose; nor suffer any fond indulgence to retard you in compleating the remainder of that work you have still to do.

My kind benefactress, says I, you were born to do me solid good as well as to give me delight. Your advice was never wanting if at any time I happened to forget myself. Your example taught me to be more obliging and tender to others. You encouraged and assisted me in any thing laudable and becoming a reasonable creature. The happiness conveyed me by your means was one topic of my thanksgivings, and I used to join more heartily in the public prayers as knowing that Riddy was one of the congregation. Shall then the remembrance of my Riddy do me a prejudice when she herself was incapable of doing any?—Your loss was a heavy and grievous stroke upon me, but I strove and struggled rather to thank Heaven for the gracious loan I had had, than to repine at its being withdrawn. I then reflected it was not wholly withdrawn, for I beheld your likeness in your two girls, and began to cast about how I might exert my love for you in my cares and contrivances for the benefit of

your children. I still call them yours, for I love them better in that light than while I consider them only as my own. They answer my cares as I could wish, and the poor things do what they can to repay them by their observance and tenderness: but nothing upon earth can fully compensate for the want of you.

28. I hear very good accounts of your girls, says she, for I call them yours for the same reason you call them mine. Somebody or other in the neighbourhood is going down continually, and I told you we were very sociable, so scarce a day passes but I hear of you all. It is one of our amusements to communicate all the good news we can pick up of each other's friends and relations: but ill news quickly stagnates, for we have no taste for scandal nor are we solicitous to enquire after things we cannot remedy. Unless when any one recovers from his evil courses, for then we have them all displayed to us in full colours, and you cannot imagine what congratulations there are among us upon such occasions: there is more joy for a while than over ninety and nine just persons who needed no repentance.—I hope, says I, your children will never deviate into those bye paths which must be trodden before they can give that extraordinary joy: you will be better pleased with

with the continual calm satisfaction of hearing they persevere in the road you have set them into.—Undoubtedly, says she, for you know we always used ourselves to prefer a lasting complacence of mind, before a sudden transport. But since it has been known you were to come here, nobody would tell me a word of our family, for they said they would not anticipate the pleasure I should receive in hearing the relation from yourself.

But how in the name of goodness, says I, could they know that? for my good patron Locke has told me that my journey was extraordinary, and did not depend upon natural causes, by which they might investigate it. —No matter for that, says she: you do not know what discoveries our people can make by their understanding the sentient language: they can discern your secret thoughts and motives, better than you can yourselves, and know by the state of your imagination what future imaginations it will produce. When you mentioned me in your argument upon the uneasiness of desire in your chapter on Satisfaction, they foresaw you would never be quiet till you had contrived one way or other to have some converse with me. So I know nothing of your history for that two years and a half.

Why,

Why, says I, it has run much in the same tenor with that you have already been informed of. Your girls go on in such improvements as I can give or procure for them, and in forming their characters to make themselves useful and agreeable, though in different ways. Serena has the modest brow, the flexible neck, attentive eye, and true countenance of a Search. Sparkler, you know, we used to call little Mamma, and she still preserves your likeness: the same sprightly look, the same lively action and the same inoffensive archness of tongue. I would instruct them in the foundations of religion and morality, but my notions are so abstracted, that though they may do tolerably for myself, they are unfit for common use. When I act like other people it is seldom upon the same grounds, my principles are so selfish, I dare not own them; even virtue with me is self-interest for I endeavour to practise it, not because I must, nor because I ought, nor because it is good in itself, nor to gain credit or escape censure of others, but because I believe it the surest way to procure my own advantage. So I scarce ever give them any documents, but as I am much with them, attend to their prattle, and endeavour to lead their thoughts gently into such trains as may tend to their improvement. If they let drop any inconsistencies

sistencies, I take notice of them with a smiling air; if they consider a thing partially, I turn it about for them in various lights, and by short observations, similies, and examples, apposite to the occasion, I strive insensibly to make their reasonings just and connected, their views clear and full, their aims directed rather to the useful than the showy; and not so much to teach as shew them how to strike out lights for themselves. As they delight in figure and allegory, I tell them the family arms of the Searches are a microscope and a balance, with a bit of gold in one scale outweighing a gaudy plume of feathers in the other, in a field of natural green, interspersed with common flowers, and a bee extracting honey from any that falls in his way: the motto for the men, Esse quam videri, To be than to appear, and for the women, Be merry and wise. That the Knowal arms are a concave mirror, placed near the eye, to see itself in, and an inverted telescope to look at every thing else, upon a brazen shield, ornamented with butterflies and trophies of victory: the male motto, Veni, vidi, vici, I came, I saw, I conquered, the female, None so pretty.

With these little helps, your girls have acquired for themselves as much soundness of judgment and considerateness of thought, as may

may content a parent. They carry an unaffected openness and gaiety upon their countenance, a watchful observance and discretion in their hearts. They have just sentiments of their Maker, esteeming him as their sole benefactor, as an indulgent but not fond parent, who gives his commands for their benefit, but will not suffer them to be disobeyed with impunity. They are careful to remember his blessings with thanksgiving, persuaded that every evil terminates ultimately in some good; assiduous, not scrupulous in their devotions, strict, not superstitious in their religion. They can sympathise with the distressed, rejoice sincerely with the prosperous, and are glad to assist in any good office within their power. They can conform their minds readily to the circumstances of their situation, pass whole winter months with me alone in a retired country, without vapours or discontent, or hankering after company, and then enter into all the innocent diversions of the town, without being fond of any; can find resources in themselves, without cards, or plays, or foreign aids, or can enjoy the busy world without being enslaved by it.

You delight my heart, says she, with this charming account of my babes: their welfare makes one of my joys in this place, and it is no small comfort to reflect that I have done

done my poor endeavours towards setting them into the right way that leads hither. God grant they may persevere in it to the jast, and escape every inordinate passion and evil habit that might fix a terrene concretion upon them. Those foul remains of our former state, my Search, are exceeding troublesome, and a long while before we get entirely rid of them; in the mean time they prove grievous hindrances to us in all our operations, both of body and mind. But I have still one anxiety for my children: as they are now women grown, they may probably e'er long come into other hands; and what changes that may make in their tenor of life and conduct canot be foreseen.—This, my Riddy, says I, is my greatest difficulty: I cannot help them so well as I would, my knowledge lying more among books than men. Never did I want my Riddy more than at this juncture: you could have assisted me with your counsels: your converse would have given a freer issue to my own thoughts.. But I miss you every day at home and abroad, in business and in amusement, in my troubles and my successes. O! that it were permitted to take you down with me to make a paradise again upon earth! O! that I might accompany you here in your improving visits, attend you in your lectures, and learn of you

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the sciences I used to teach! The laws of this place lay a severe restraint upon the fondness of love, a love pure and innocent, like that David bare Jonathan, surpassing the love of women. My rigid tutor here has forbid me one civil salute: am I not allowed to take your hand, whose soft touch used to steal a thrilling joy into my heart?

At this the dear eyes seemed ready to overflow with tears of joy and love. There came out a taper arm and pretty hand, having on one of the fingers the semblance of our wedding ring, that pledge of our plighted troth and seal of our union. I shot forth half a dozen eager arms to take hold of it: and now perhaps had eagerly grasped it so fast that nothing could have parted us without disruption of our vehicles, and perhaps the course of fate had been broken, had not that severe, relentless pedagogue, that hard-hearted old batchelor, Locke, who never knew the tenderness of love, been too nimble for me. For he darted out a great brawny arm and mutton fist, with which he catched up the skin of my vehicle, as one catches up a dog by the nape of his neck, and away we flew with incredible swiftness.

29. As soon as he let me go, I began to lament and expostulate after a woeful rate. Prithee, saye he, do not pretend to be angry with

with me, when you were to blame yourself. Did not you promise me to be more discreet? to make your love pure and angelical? instead of that you have burst out into all the flames and raptures of an earthly passion. I told you we employ our passions here as servants, but never let them become our masters, nor slip a moment out of the hand of reason: for the very best of them is not to be trusted. An injudicious love often has the effect of malice. What a wish was there, to carry her back with you! Was that your kindness to wish her groveling again in the filthy mire of earth, liable to womanish fears, bodily distempers, infirmities of old age, and the hazard of being disabled from ever regaining these blissful seats? Then you do not consider what an injury you were doing her if I had not prevented you: we have almost cleared her of her concretions, the only one remaining was a little too much fondness for you, and this you would have fixed deeper in her again by your indiscretion. Did not you observe her swimming eyes, which showed a womanish weakness stealing upon her?—I stand corrected, good Master, says I, and am convinced you favoured my wishes most when you seemed most to thwart them: for I would not do her a prejudice, no, not the least momentary hurt, for all the pleasures in the

the world. But what must the dear creature think of me for leaving her so abruptly?—Never trouble yourself about that, says he: she saw plainly enough you could not help it, and before this time is sensible I acted kindly: she would presently recover herself, and go again to her needlework. Do you apply yourself to improve the state of your own mind: the news of that will be the greatest pleasure you are now capable of giving her, and the purer you come up, the sooner you will be fit for her company. I perceive you have store of concretions about you, and to them were owing your intemperances: we shall have some work with you when you return, and you must undergo some discipline. Do, my boy, while upon earth, strive to lessen the need of it as much as possible. Take my word for it, the practice of virtue, the moderation of all your desires, and vigilance against evil habits, will save you a great deal of inconvenience, vexation, and self-reproach, by-and-by. But I must leave you a moment, to send the particulars of our last adventure to Gellius. I see nobody within call going down. I shall find somebody or other before I have gone five hundred miles. I will be with you again presently.

30. Being

30. Being left alone, my thoughts ran again upon the dear object of my wishes. I endeavoured to moderate my fondness with as much care as possible, yet perhaps indulged it a little too freely. While I was in this amusement, I felt myself on a sudden seized all over by something hard, rough, and scorching, a hundred cords seemed to wring me round, a thousand points struck into my flesh, and I felt rough teeth grinding upon my skin. Ideas of resentment, cruelty, avarice, injustice, lewdness, debauchery, blasphemy, terror, shame, regret, and despair, poured upon my imagination, and pierced me to the very soul. I found myself tempted to all kinds of wickedness, to snatch the bread from the hungry, tear out the bowels of children, pluck out the eyes of my dearest friends, dash out my own brains against a stone, wallow in all the impurities of a brothel, rebel against the throne of heaven, and worship the devil. I struggled, with all my powers of body and mind, to deliver myself from my distresses in both, and call up ideas opposite to those that oppressed me. Upon the first effort I found myself relieved, the cause of my grievances was removed, but though I was free from pain, it left a strange dismay and uneasiness upon my mind. My good friend came up instantly to me. What's the matter? says he

he, you seem all over agitation and disorder. —God bless me, says I, I never was in such a taking in all my lives. All pain, smart, and burnings without, rage, horror, anxiety, despair, and torment within. Sure these are not fits occasioned by the terrene concretions. Heaven save me from any more returns of them: I would not undergo such another moment for all the pleasures in the universe.—No, no, says he, thank Heaven your concretions are not so bad as that. Oh! now I see it. Look yonder: there is the enemy that has done you all this mischief. I looked the way he pointed, and saw a black bottled spider as big as myself, sprawling and cuffing with his nasty claws against three or four vehicles, who thrust out arms as long again as usual, to push him away: however, they managed him pretty easily, and drove him before them to some tellar rays that pointed directly down to earth. Pray, says I, what hideous monster is that? The very sight of him, though so far off, makes me shudder, and almost renews the pains I suffered from him, That, says he, is one of those wretched vehicles I told you of before; his name, while upon earth, was Cæsar Borgia. I do not know how he came to stroll up here from the regions of darkness, for they very rarely appear among us. Rarely,

says

says I, is too often: I shall be afraid of them as long as I stay here.

My dear good friend, pray never leave me alone again.—Do not be frighted, child, says he; we seldom see them; they are afraid of the rays of light which they know not how to deal with cleverly, and when they do come, they never meddle with us: nor would he with you if you had followed my precepts. I am confident now that the moment my back was turned, you gave a loose to your passion again, for he would never have dared touch you if he had not observed you under some impotence of mind. Therefore for the future keep your desires in order, your reason sound, your mind pure; and you may defy the devil and all his imps.—But how, says I, could he overspread my imagination with such a dreadful cloud of foul thoughts, which never entered there before?—There, says Locke, you had a specimen of the sentient language: I am sorry you took your first lesson under so bad a master. By applying himself close on all sides of you, he threw in his own sentiments: it was well you exerted yourself in raising up contrary sentiments that made him glad to quit you immediately, for those evil spirits feel an envy against every thing better than themselves, which increases their torment.—Heaven defend me, says I, from

from the venom of these spiders. The dread and remembrance of it hangs still upon me. I have no command of my thoughts. I shall never be myself again.—Come, says he, let us try what a second lesson under a gentler master will do. We will endeavour to cure you in the same way by which you were hurt. Come, flatten your side a little, that we may have as large a contact as possible. He then applied himself close to my side, and though I could discern nothing distinctly for want of skill in the language, I felt such a general gleam of piety, sound reason, benevolence, courage, temperance, cheerfulness, quiet, and satisfaction, spread over my imagination, as dissipated all my troubles, and restored me perfectly to myself again. Thank ye, says I, incomparable master, I find you can assist, instruct, reprove, sooth, and every thing just as is proper. This is an excellent language when spoken by a good orator: would I could learn to talk like you, or at least to understand your eloquence compleatly, so as to let none of it fall to the ground.

31. But now I have the spirit of sobriety upon me, with your permission I would fain receive some instructions which might prevent those mistakes that occasioned my failing in it before. I have always been told that love was a virtue, and though this be understood

derstood in the first place of a general benevolence to all rational creatures, yet I never knew we were restrained from fixing a larger portion of it upon some particular objects. Husbands love your wives, is one precept of the Gospel, and all the Searches of name have recommended an affection to our relations, friends, and benefactors. I know this is best exerted in doing them service while they are with us: but are we to forget them as soon as they are gone out of our sight? or how are we to distinguish the virtue from the passion of love, so as to retain the one without touching upon the other?—Truly, says he, I am not so well qualified to descant upon that particular branch of love, which I know you are most solicitous to understand, having never had experience of it myself. I will only say this, that true love of any kind forbears every thing detrimental to the party beloved, and never urges to things inconsistent with the interests of any other kind. But there is Plato yonder, who having composed amorous sonnets in his younger days, knows more of that subject than me; and as he has a lively imagination, will talk to you in a manner more suitable to your own turn. I can carry you to him if you will: he is not a vast way off, we may be with him soon provided we make haste.—I shall be very much

obliged to you, says I, for the favour: I long to see that venerable founder of the Academy. —Do not expect, says he, to see a formal old doctor in him; he lived so long at the court of Syracuse, in intimate familliarity with the king and ministers there, that he is quite a fine gentleman.

32. Pray, says I, is it necessary we should travel so fast as we have done in our journeys hitherto? As my time here is to be short, I would willingly make the most of it, and not lose the benefit of your conversation upon the way; but though I tried several times to talk to you, I could not hear myself speak; for we outstripped the vibrations of ether conveying the sound: I suppose any body a mile behind might have heard me plainly, for I took notice that the passengers sometimes called to one another as they went along.—You mistake the case, says he, for we never travelled so fast as the rays we went upon, and Newton has told you that the vibrations of ether overtake the light. The truth is, that you did not speak when you fancied yourself talking, for the swiftness of our motion, causing a draught of ether against your sides, hindred the play of your vocal fibres, just as a man riding a race horse finds his breath stopped by the wind. As we have gotten a stronger tone to our fibres by exercise,

cise, we can make ourselves heard notwithstanding; and so perhaps may you too if we abate a little of our pace, but then you must exert yourself as if you were hallooing to somebody at a distance. He then took me by the hand, and we went on at a less violent rate than before.

33. As we proceeded I began to try my talent at vociferation, wherein I found the more difficulty, for having never been used to speak in public, and perhaps had not succeeded at all, had I not been conversant with some deaf and inattentive people below, who forced me to prepare myself for this exercise, which, though laborious and painful for the time, left no fatigue or faintness the moment I desisted: however, I made shift to be heard just enough for him to comprehend my meaning. After apologizing for the curiosity natural to the Searches which his goodness hitherto had encouraged me to indulge, I begged to know where lay those regions of darkness wherein he said the unhappy vehicles resided. In the pores and caverns of earth, says he, or the atmospheres surrounding them. For the foggy vapours, abounding there, a little stupify their faculties, and make them less sensible of their torments. When they rise above ground, they keep in the nocturnal hemisphere, and if by great chance they

they mount up into ether, it is always along the shadowy cone of night, which leaving them exposed to the thick solar effulgence, they are bufletted about, not knowing which way to go, until some of us drive them down again.—Pray, says I, are they made like other vehicles?—Exactly, says he, and have the same natural powers and faculties that we possess, for nature designed us all for the occupations and enjoyments of this delightful country: but they have debilitated themselves by the vast quantity of terrene concretions worked into them. For these gross particles of heterogeneous matter prick their flesh incessantly like so many needles, feel like worms boring into their vitals, obstruct their circulation, thereby raising feverish scorchings, and distort their imagination, laying it open to all unruly passions, and rendering it incapable of a pleasing or a comfortable thought. Imagine only with yourself what a man must suffer who should have thorns buried all over in his body, worms gnawing his entrails, the foulness of a distemper filling his flesh with burning heats, and his head with melancholy, frightful phantoms, and horror.—Terrible, indeed! says I. But you told me, that our vehicles lie enclosed in our mortal bodies; how comes it they do not feel inconveniences from their concretions

tions while alive?—So they do, says he, sometimes in the mental part: but I told you likewise that the vehicle, while enclosed in the body, can exercise its functions only where it communicates with some nerve of the outer machine, the rest is covered and kept motionless by the gross body whereto it adheres. But when the percipient soul (to use your words) comes out naked, and begins to exert all her powers without external impediment, at every motion she makes she finds the sharp concretions standing cruelly in her way. Just as a child in the womb might bear a load of phlegm upon the lungs without inconvenience, but immediately upon birth, when the lungs began to play, it would give great pain and trouble. And as volition never ceases working, they never cease being tormented: so that the boring worm dieth not, and the feverish fire is not quenched. You may remember I told you we abounded in desires, but had no wants: their desires are all wants. They are restless and impetuous, but never satisfied, always eager in action but to no purpose, perpetually flying from one evil into another as bad. Add to this, that instead of alleviating one another's miseries, they strive to increase them: continually in broils and quarrels, actuated solely by envy, spite, and rancour; melancholy and distracted with

with their own thoughts when alone, teazed, abused, and plagued in one another's company.—Do you never, says I, try to deliver them from their concretions?—It has been tried, says he, but without effect: for there is no possibility of removing a moral concretion, unless the patient will do something to help himself, we can only open the fibres with our needles to give it passage, but he must discharge it at the aperture by an effort of his own. But these poor creatures are so perverse, they fight and struggle against us whenever we go to assist them: so we are forced to abandon them to their wretched fate.—Does not the thought of their miserable condition, says I, stir up a compassion in you sometimes that abates your enjoyments?—I told you before, says he, we never suffer any passion, not even love or pity, to intrude upon us without leave: when there is room for any relief to the distressed, we can raise a strong sentiment of compassion to invigorate our endeavours in administering in it, but when we know compassion is wholly unavailing, productive of no good to others, but of uneasiness to ourselves, we can utterly throw it aside as a weakness.—Happy temper, says I. But since I have not attained it, permit me to hope that, as you say these wretches have a continual burning fever upon them, the violence

lence of that will in time unhinge their constitution, and deliver them from this loathsome prison.—That cannot be, says he. I have told you already, that the threads of our composition are so strongly spun, nothing can dissolve them before they wear away of themselves at the appointed time: outward accidents may hurt, inward foulnesses distend, distempers may disorder, but none of them can destroy us.

34. What then, says I, is their misery eternal? for I remember you said the disruption of a vehicle was never known before all concretions were entirely purged away.—That is a point, says he, which I cannot resolve you with certainty. There are different opinions among us, none founded upon experience of facts: for as we avoid all intercourse with them, we know not whether their numbers lessen or no. I can only say, their continuance in this condition is very long, at least seventeen hundred years, for it was but the other day that Nero was seen here kicking among the solar rays, trying to raise a combustion, by throwing them against one another, and so to set the world on fire. But divines generally hold the affirmative. Some heretical doctors maintain that they will be advanced, as well as ourselves, after a certain period: for they say, the disruption of our vehicles

vehicles never happening before an entire clearance of the concretions, is at most only a negative proof of the contrary, and they do not imagine that any material composition is made to last for ever. Many of the philosophers suppose they will be reinstated in mortal bodies, wherein the distempered parts being kept quiet and motionless, the old concretions will work out of themselves, and they will return pure if they do not contract new ones by their ill conduct. However the truth be, their present condition is the same to them as if it were eternal, for they have no prospect or notion of any deliverance, so have not the least glimpse of hope, that last refuge of mortals and cordial for every trouble.

35. What principles then, says I, do your disputants build upon, since they have not the foundation of facts?—The Divine Attributes, says he, the only foundation for our reasoning upon matters where experience affords us no lights to direct them.—Pray, says I, if I may be so bold, how do the maintainers of the affirmative reconcile their opinion with the divine goodness and mercy?—The counsels of God, says he, are unsearchable, even to the most intelligent of creatures, and his Attributes incomprehensible. We agree unanimously, that God is equal in his dealings, and

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righteous in all his ways, that his goodness is infinite, and his mercy over all his works: nevertheless, we are sensible that we are not competent judges to determine precisely what belongs to equity, goodness, and mercy. Yet thus much we assure ourselves of, that the purposes of God, never terminate ultimately in evil, neither does he punish in anger, nor unless for some greater good to result therefrom. Perhaps we should grow remiss and thoughtless in these scenes of continual ease and delight, if we had not those dismal spectacles to rouse and alarm us: perhaps their sufferings are some way or other necessary, to secure the happiness of the blessed spirits above. Some young vehicles talk largely of a free-will of indifference, but they are little regarded here; for we know of no merit in ourselves, and acknowledge those virtues and happy dispositions of mind which brought us hither to be the pure bounty of Heaven; for though we worked out our own happiness for ourselves, it was God who gave us the powers to work with, the springs and motives determining us to employ them. According to the opinion most generally prevailing, we regard the state of these wretches as eternal, never to be remedied by natural causes: nevertheless, there is an Almighty Power which can alter the course of nature, and may interpose in their favour,

favour, but when or in what manner we do not pretend even to conjecture. Thus as the recovery of fallen man was a mystery to our predecessors which they desired to look into, so the deliverance of these unhappy victims of divine vengeance remains a mystery with us, which we still desire to look into.

36. I thanked my instructor, and added, that as this was a melancholy subject I should be glad to divert my thoughts, if he pleased, during the remainder of our journey, with looking about me upon the objects occurring in our passage. I saw travellers passing along upon other solar rays near me on the right hand and the left, others upon stellar rays crossing above, below, before, and behind me: and the ethereal fluids running into various commixtures by their perpetual undulations. I beheld the moving scene with more pleasure than a citizen escaped five miles from the hurry of business into a summer-house hanging over some dusty turnpike road. I could retire within myself when I pleased, and enjoy my thoughts secluded from all external objects, which is more than the citizen can do, for when he has not his senses to entertain him he falls asleep. But my curiosity to make new discoveries soon drew me from this merely amusing prospect to observe the rays of light as they whisked by me. I found

found that by carrying my eye along with some of the corpuscles, I could discern them pretty distinctly. They appeared to me something like the chain or cross bar shot used in sea engagements, only instead of a bar between, the whole consisted of seven balls, flatted on the sides, by which they adhered to one another. I wished to see a refraction but could not, so can only suppose their flatness makes them more apt to rejoin when collected by a Lens after refraction, and unite again into a white ray. I perceived the vibrations of ether overtake them, and when they were in the back part of a wave, their motion was retarded, which put them into that state, called by Newton their fits of easy reflection; as when in the fore-part, they were in fits of easy transmission. But my greatest pleasure was to observe the expertness of my conductor: he did not skate with a stump leg, as I had imagined before, but put out a broad foot with which he could have a good flat tread upon the corpuscles, and though they moved with different velocities according to their fits of reflection or transmission, yet he so humoured their motions by the pliancy of his joints as always to take just the force he wanted to direct his step with such exact nicety, that when we came over to the opposite ray, we never fell into a

vacant

vacant space but always close upon some corpuscle which served us for our next step. My curiosity being satisfied, my mirth began to operate. Methought I made a very ridiculous figure dangling behind him. I fancied myself like a bone that some unlucky boy has tied to a dog's tail and then turned him into the street. However, my merriment was all to myself, for the passengers, used I suppose to such phenomena, took no more notice of me, than we should on meeting a good woman carrying along a child in her arms.

37. While employed in these amusements, which entirely dispersed all my gloomy thoughts and gave a cheerful turn to my mind, I found we stopped. There lay a vehicle before us wholly collected within his bag, and seeming wrapped in profound meditation. My conductor gave him a gentle tap when presently there came out the honest, open, lively, but sensible countenance and broad shoulders of the first Academic. Hah! says he, my good English cousin Locke, I am always heartily glad to see you. I shall never forget the honour you have done my Ideas by bringing them into greater repute in the Tin Islands than ever I could do in Athens. But who is this honest looking young spark you have gotten with you? Have I ever seen him before? I beg pardon

if

if I have forgotten his face.—A countryman of mine, says Locke, just arrived among us, and a distant relation, of an under branch of the Searches. He is ambitious it seems of imitating my seriousness and your vivacity, and I have made bold to bring him to request a favour of you.—With all my heart, says Plato, any thing in the world I can oblige my cousin in. Pray, young Englishman, what are your commands? You must know, says Locke, he is a disconsolate turtle that has lost his mate, and since he cannot get her out of his head, he wishes to have a lecture from you upon the subject of love, that he may learn to love like a philosopher. The polite founder of the Academy very readily engaged to recollect what he could upon that head, that he had learned from his master Socrates.

38. My master, says he, used to tell us there were two Venuses, distinguished by the names of Thalassia and Urania. The former sprung from the foam produced in the sea by an oily mud, driven into it by torrents. She is compleatly formed for enchanting the eyes of mortals: her cheeks smooth and blooming, her lips moist and pouting, her aspect sprightly and engaging, her round neck and swelling bosom generally bare, her shape neat and elegant, her limbs delicate and pliant,

pliant, her vestments loose and flowing, brocaded with cooing doves and sportive Cupids. She glides in easy swimming motions, or trips lightly along with wanton airs, and winning graces. Her eyes are bright and striking, but a little short sighted, so she follows the pleasures nearest at hand, seeing nothing of those at a distance, nor of the pains sometimes close at their elbows. She plays a thousand little artful tricks, dissembles, casts herself into any form, to gain her ends, but incapable of laying an extensive well-concerted plan. Urania, heaven-born Fair, offspring of Almighty Jove, Father of Gods and men, is his best beloved daughter. She carries a dignity in her aspect, blended with mildness and benignity, commanding at once both love and respect. Her motions are graceful and easy, her deportment majestic and uniform, her cloathing magnificent but not gaudy, being a rich tissue woven of threads, covered with two celestial metals called Prepon and Kalòn. Her eyes are strong, clear, and piercing, though she follows pleasures too, she discerns the remotest on all quarters, and counts the pains mingled among them: she looks backward upon the past and forward to the future, and extends her influence upon every thing around her. Her face and person cannot be particularly described

because

because she comes down always in a veil, so that mortal eye can scarce obtain a glimpse of her; but it is said, if we could fully discern her beauties, we should be so enamoured with them as never to think any thing beautiful beside. She was present with her father when he made the worlds, and the blessings he poured forth upon them passed through her hands: she still moves him to shower down his mercies from time to time upon mortals, and solicits him for leave to descend herself to rescue them from their miseries and errors. But they cannot approach her unless introduced by some inferior Goddess, of whom the Thalassian Venus is best qualified to perform that office: yet neither do the inferior powers take conduct of them upon their entrance into life, nor until arrived at some maturity in their faculties.

39. For when Psyche first falls from the unknown regions, she lies helpless and groveling upon the ground; the dust of the earth gathers round her and forms a case, which would wrap her in perpetual sleep but that there grow little hairs or stumps of feathers in all parts of it: these being brushed against by external objects and appetites continually rolling over her, prick, and stimulate, and awaken her out of her lethargy. She then starts up and plays about within a small enclosure

closure surrounding her, called the garden of Self. Every thing is new to her, every thing engaging: she admires the wild plants growing there, which quickly shoot up large and vigorous stems, bearing flowers alluring to her sight and fruit suitable to her taste. If any body controuls or endeavours to guide her motions, she resists, and frets, and breaks from them as soon as possible to run to the gardener Selfish, who indulges her desires, finds her abundance of diversions, and makes her store of pretty play things. The last of these is a neat, light, and easy car to be drawn by two horses, called Concupiscible and Irascible, which the gardener takes care to feed and pamper continually with his own hand. With this she courses about the smooth walks of the garden without much damage, only now and then a slight bruise or gentle overturn.

But in a little while the garden gates fly open, and Psyche upon her car launches forth into the wide world. She finds an open champaign before her, and the passengers obliging to give her way. The horses gambol about without rule or guidance, for she knows not how to manage them, but looks back to the gardener upon the foot board behind, who knows as little how to manage as she. He has gotten a basket of his wild fruits, with which he wantonly pelts the

the people on each side. They find them harsh to their taste, and some are hurt by their hardness. This makes them clamorous, upon which the horses are frighted, grow rampant and quickly overturn the car, dragging poor Psyche along until she is torn to pieces, unless some conductor luckily step in to her rescue. Happy is she if Thalassian Venus chances to pass that way: the brisk Goddess mounts the Concupiscible horse, and with the whip of Desire in her hand keeps them both in tolerable order, making them pull together, and singles out some object whereto she drives them in a line. She sends the gardener back to graft learning, politeness, and accomplishments, upon his wild stocks, with orders to bring back the fruits they shall produce, which she deals out among the persons near her that they may make way and assist her progress. It is she first opens the heart of Psyche, teaches her obligingness and to look a little beyond herself. Nevertheless, the Goddess is apt to change from object to object, or if she fixes upon one, drives so eagerly as not to heed the rotes in the way, and sometimes even to hurt the object she pursues: for she aims at pleasure not at good, and her own pleasure rather than that of others whom she most fondly affects. She plies her whip too furi-

ously upon the horse she rides, and urges the other to be mettlesome: so the car hobbles, the clay of satiety clogs the wheels, and Psyche is brought again into imminent danger.

Her only refuge now must be in Urania, who never refuses her assistance to those that implore it sincerely. The celestial Power descends into the car, corrects the errors of the sea-born Goddess, takes the whip from her hands, delivers it up to Psyche, and instructs her how to handle both that and the reins. She sends the gardener Selfish back again to graft the virtues, for they, being exotics in the sublunary climates, will not grow out of the earth, but must be engrafted upon the wild stocks that nature has thrown up spontaneously; and the stronger those stocks are, the more vigorously they flourish. When he has brought her the fruit of these celestial scyons she dismisses him quite, for she will not suffer him to load the car, nor Psyche to look behind upon him any more. She purges her visual ray with euphrasie and rue, and from the well of life three drops distils, and sheds her own benignity upon her. She instructs her to follow good principally, and pleasure only when not interfering with the other. She enlarges her heart, rectifies her judgment, extends her views, and teaches her to distribute

bute the last brought fruits wherever they may be serviceable. She keeps the postilion Goddess constant to the pursuit of one object, and if that be snatched away by fate, she sometimes, as I find was done in your case, discharges her. She presents its picture to Psyche emblazoned with golden rays by her sister Elpis, but will not let her lament nor sigh over it, nor interrupt the distribution of her fruits.

Elpis was the second daughter of Jove: she goes clad in virgin white and has the softest hand of all the Goddesses, for the touch of it sooths the smart of every evil in Pandora's box. She keep always in the line between her father and the earth, so that whoso turns his face aside from Jove, will never have a glimpse of Elpis. The car then rolls tranquil and steady along until they arrive at the gates of the country, which being beset with terrors and ghastly apparitions frightful to Psyche, the Goddes makes her look back upon the road they have traveled and the people eating the fruits they have distributed. She then beckons to the satin-robed Elpis, who lets down a golden anchor: the Goddesses place Psyche thereon, and the elder sister holding her firm while the other pulls the cable, all three mount up into the blessed abodes.

40. When the divine Plato had ended, his voice still chanted in our ears, and left the same effects as the charms of poetry upon the imaginations of the whole circle; for several vehicles had gathered round us as soon as they perceived him beginning to open. There was one among them whom I could not but take particular notice of: his nose was flat with wide open nostrils, his features large and hard, his whole face the plainest I ever set eyes on; nevertheless there was such a sensible simplicity, such a good natured humorousness, in his countenance that one could not help being prejudiced in his favour. He stared at me, and we surveyed one another for some time. You look at me so wistfully, says the Flatnose, that I fancy Uranian Venus has sent down one of her own Cupids to strike us with a mutual affection. I do not know how you come to be taken with me at first sight, but it is no wonder I am smitten when I see before me the Displayer of the Light of Nature, the hope of the Searches, the ripened fruit of our illustrious branch. For every age improves upon the former, and the sons successively grow wiser than their fathers. The divine Plato here has put finer words into the mouth of Socrates than ever he could utter himself: your father Locke has refined upon the ideas of Plato; and you like another Achilles

Achilles have proved yourself a better man than your father. I was abashed grievously at this high-flown compliment, and turning to Locke, Pray, says I, is it the fashion in this country to flatter folks out of their senses? I thought you had been all sincerity and plain dealing here. For goodness' sake who is this courtly gentleman? Sure it must be one of Dionysius's lords of the bed chamber, that Plato has brought with him from Sicily. And now, upon a second view, methinks he has some features that show as if he did not dislike to have his miss and his bottle.—You are not the first, says Locke, that have judged so of him before they knew him. But look at him again and recollect whether you have read a description of somebody you think like him. After taking another survey I cried out to Locke, I will be pierced if this is not Socrates himself. Oh! now I am more mortified than ever.—What is the matter with you? says Locke. Can you desire better than to receive such a testimony from a person whom the oracle has pronounced the wisest man in Greece?—No, no, Pappa, says I, I am not such a child neither to be catched so. I have heard enough of his irony, and that his words are to be turned topside the other way to understand them. I have not forgotten Elian's story of the horse rolling upon

upon his back. If I had any money in my bag, I would lay a hundred guineas now that he sees me to be an errant sophist: for he used to deal with them just in this manner.—Phoo! says Locke, so he does with all strangers the first time he accosts them: if they take him in earnest, it puts them into prodigious good humour with him; if they see through the veil, it makes them smile and that has the same effect. You had better humour him in his own way, it will draw on the conversation the easier; from whence it is a great chance but you will pick up something worth carrying away.

41. I endeavoured to follow his advice, and plucking up a good courage, turned again to Mr. Flatnose; Pardon me, says I, amiable Socrates, that my eyes were drawn off a moment from contemplating your admirable beauties, but I was willing to consult my patron here how to behave so as to appear most agreeable in your sight: though, without asking, I might have known better manners than to contradict the person beloved: therefore shall readily acknowledge myself the wisest man that ever lived. And I have good reason for what I say, for you were the wisest, before, but the oracle declared you so because you knew no more than one thing, which was, That you knew nothing;

nothing: now I go a step beyond you, for I do not know whether I know any thing or not. —I rejoice, says Socrates, that we both value ourselves upon the same account: for conformity of sentiments promises a lasting and cordial love that will not fade. Here I jogged Locke, and whispered him, how it would divert our ladies below to hear two such Adonises talking so sweetly of our reciprocal passion! —Oh! says Locke, they do not understand the language of Uranian love any better than we old bachelors did of the Thalassian. Socrates went on; is not love a flame?—I was always, says I, taught so.—And does not a flame require some fuel to keep it alive?—To be sure, or else it will go out.—Methinks I should be very sorry to have this flame, that is lighted between us, vanish like a meteor. What fuel shall we find to keep it burning?—I protest I do not know, says I. If I had my Euridice again with me I could find a thousand ways to express my love and foment hers; but it is quite a new sort of amour: I no not know how to proceed in it. —Does not love, says he, incline one to please the party beloved? and does not that encourage the like flame in the other?—Most of any thing that I know of.—Then if you have fallen in love with me, you will do every thing to please me?—Yes, very readily. —If I should ask you to take a skate with me upon

upon a pair of solar rays, you would do it?—That I cannot, for I have not learnt to go: but I would if I could.—Well, but suppose we were both upon earth again, and I wanted a peach out of your garden: you would give it me?—Certainly: you should be heartily welcome.—Or a cup of your small beer: you would call for it?—Instantly.—For no other reason than because I had a fancy for it?—No: for I should want none other.—Suppose the Athenians had not condemned me to drink the Cicuta, but I had taken a fancy to a draught myself: you would have procured me a bowl without delay?—No, indeed: that would be no instance of love I am sure.—What! not if it pleased my fancy?—Not if it pleased your fancy would I give you a thing that should destroy you.—Did not we agree just now that love consists in doing every thing to please the party beloved?—We did, but I believe we were mistaken, and ought to have placed it rather in the good than the pleasure of the beloved object.—Well then, says he, as you love me, you will attend always to my good?—To the best of my skill and ability.—If I was hungry and desired trash, you would refuse it, and give me wholesome food?—You will never put me to that trial.—But suppose I should, what would you do?—I should

show

show my love best by giving you the good victuals.—If I were sick, and liked rather to swallow a draught of honey than the medicine proper for me, what would you do?—Get you to take the potion if I could.—Because you would consult solely my good?—Yes, for that reason.—And if the potion were nauseous, and I desired a little honey to sweeten it, you would refuse it me?—No, that would be mere crossness.—If the physic would do me the same good, whether sweetened or not, would you give me the honey?—Ay, surely.—Why?—To make it less unpleasing to your palate.—But did not we agree last, that lovers were always to pursue one another's good, and not their pleasure?—You have drawn me into a dilemma, says I, do so much as extricate me out of it again.—I can extricate nothing, says he; I only practise my mother's trade of midwifery to bring your thoughts to the birth; you must deliver them by your own efforts.—I suppose, said I, if the same thing be good and pleasing too, we may do it without scruple.—So it should seem, says he, for that agrees with both our positions.

42. But, added he, do not lovers use to take pleasure in pleasing one another?—I can remember the time, says I, when the pleasure of pleasing was my sweetest delight.—Then

—Then, if you love me, should not you think of something I can do to please you, that I may taste some of that sweetest delight?—You can do nothing to please me better than by improving my knowledge in any way you think proper: you know best how to choose.—How can I improve your knowledge, when I have none myself but of one thing, that I know nothing?—Then teach me to know the same of myself.—Let us consider first, what good it will do you: for you know we have not yet settled whether a lover may please his paramour, unless in something that will do him good at the same time.—Well then, tell me what it is good for: you must certainly know better than any other, because you were the sole possessor of it.—Nay, do not ask me, you know we agreed that you were the wiser man.—Very true, I had forgot that. To be sure, I have a vast deal of wisdom in me, but I protest I do not know how to get a crumb of it out.—Then we must try to assist you in the delivery.—Come, Mrs. Lucina, to your office; for you have raised a great rumbling within me, but I cannot tell whether it be a true labour, or only a wind cholic.—We shall see that presently. Did not you desire me just now to improve your knowledge?—Yes.—And you looked upon the

the improvement of your knowledge as a good? for the wisest man that ever lived would hardly have desired a thing that was not good for him.—Certainly: for I look upon the attainment of useful knowledge as the greatest good that can befal a rational creature.—And you think yourself a rational creature?—I hope so: for I can walk along without running against a post, and cut my meat without cutting my fingers.—Then you know how to cut your victuals without hurting yourself?—It should seem so, for I practise it morning, noon, and night.—But tell me, is knowledge improved by learning what we are ignorant of, or what we knew before?—What we were ignorant of.—Suppose Hippias, Prodicus, Protagoras, or some other of those great men, who understood every thing, and made themselves the admiration of all Greece, should come down upon earth to read lectures in Gresham college; and my cousin John Locke should come and tell you, Ned Search, if you will go to Gresham college to-day, you may hear an excellent lecture upon the art of cutting ones meat without cutting one's fingers. You would go?—No sure: why should I?—Nay, why should you not? It is an excellent art, and saves a man a great deal of smart and inconvenience.—Very true: but I know

I know that art well enough already: I do not want to be taught it.—But though you have this art, yet if you did not know you had it, should you want to be taught it?—Yes, certainly.—And if there were any other art you were ignorant of, but did not know it, should you want to be taught?—I am afraid not.—Could you learn any thing without wanting to be taught it?—Not very well; for if any body went to teach me I should not attend to them.—And could you improve without learning?—Very indifferently.—Can you improve without first being ignorant of something?—There would be no room for improvement in that case.—Or without knowing you were ignorant of it?—Neither then, for I should fancy myself too wise to learn.—Then is not the knowledge of ones ignorance a necessary step towards improvement?—I see plainly that it is.—Are not all sciences more productive of good fruits the further they extend?—That is a natural consequence.—Then if you could know that you knew nothing, should not you always want to be taught?—I suppose so.—And always be ready for improvement whenever it were to be had?—Well, says I, you have delivered me of a hopeful issue, and I beg you will take care to nurse it up well. To say truth, I have taken some pains in this science

science of ignorance below, and examined myself as carefully to find out what I did not know as what I did. I have made strange discoveries of my ignorance in points where one would least have suspected it, but am afraid there are more behind, which I have not yet found out: therefore should take it very kindly if you would teach me the science compleatly.—I cannot teach it, says he: nor can any mortal beside.—Where then did you learn it yourself?—I was divinely inspired.

43. I never knew that before, says I. We were all willing to allow you as much light as human reason can give, but we did not think you pretended to revelations.—Did you never hear that I had a Demon constantly attending me?—Ay, but as we knew you were a joker, most of us thought you in jest. The very orthodox divines insisted positively that you dealt with the Devil, that you died an idolater, having in your last moments directed the offering of a cock to Esculapius, that your virtues were so many shining sins; and demonstrated from thence that the very best of heathens were under the power of Satan. Those who entertained the most favourable opinion of you, could never believe you in earnest, for none of us but would be frighted at the thought of having such an imp

imp at his elbow.—I am surprised, says he, you should be so much afraid of them. Are they not common among you?—So uncommon I do not know any body that ever saw one.—Strange! It was the current persuasion among the Searches in my time, that Jove sent down his guardian Demon to every man to protect and warn him against mischief. Do you never hear their voices?—Never myself: nor did I ever meet a man in his senses who said he had. I know a madman who sees and hears them too very frequently. —Recollect yourself. Did you never meet with a person when most in his sober senses, who, after having acted very wrong, complained that something upbraided and stung and pricked him sorely?—— Here Locke whispered me. Do not you understand him now?—I think I do, says I, but not perfectly. Then turning to Socrates I said. Now you put me in mind of it I have heard of such things, and our doctors tell us from the pulpit that they happen very frequently.—And do you think, says he, the Demon gives these prickings only to torment the patient, or for his benefit, to make him take better heed for the future to its first admonitions when he is going to do a wrong thing?—For the latter cause.—Then why should you think him an imp of Satan? would Satan do any thing

thing to overthrow his own kingdom?—We are told not, upon the best authority.—Should you not rather esteem him a faithful monitor sent by Jove in kindness to mortals?—I see no reason against it. But some I have heard of play him a scurvy trick, for they sear their flesh with a hot iron, which makes it insensible to his prickings.—Did you ever know them get any good by this trick?—Never, for they always run into grievous disorders, or drew themselves into inextricable mischiefs.—But you yourself, when you have been eagerly set upon some fancy, did you never hear a secret whispering that you had better desist?—Many a time.—And in the course of your meditations, when some thought has come strongly upon you with the glare of a demonstration, have you never perceived the like whisper to beware?—More than once.—What did you do thereupon?—Revise it more carefully.—And what was the consequence?—Either I discovered it to be fallacious or found some better bottom to build it upon.—And when in pursuing the light of nature, you have stooped down to pick up something very shining have you not heard the still voice pronounce the words Offence or Dangerous?—Yes, and have suppressed many things upon that admonition, and perhaps should have suppressed more had I as quick an ear to the voice as you.

44. But

44. But I have some doubt, continued I, whether I know the right voice from all others, because it seems to speak to me in a different manner from what it used to you. I cannot think myself more highly favoured by Heaven than you, although you were never christened according——Hush! hush! The Demon whispers Offence.—Then I must suppress something. And yet my Demon seems to be more friendly than yours: for that only dissuaded and never impelled you to any thing; but sometimes when a laudable action has occurred to my thoughts, and a humour of indolence has witholden me from entering into it, the Demon has instigated and never left me quiet till I bestirred myself. —Should you not have bestirred yourself without him, if that humour of indolence had not stood in the way?—I suppose I should. —Then did he need to do any thing more than dissuade you from indulging that humour? —Why no, as you say, I think he did not need. But what then impelled me to the action?—Might it not be some inclination or appetite?—I flatter myself it was a virtue, but virtue cannot be the same with appetite, because its office lies in controling and restraining them.—Do you remember what the divine Plato told you just now?—Very well: I have not lost a word of it.—Did not he say

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the virtues grew out of the wild stocks thrown up by nature?—He did.—And may not the grafts partake something of the stocks that nourish them?—So the gardiners agree.—Then may not the virtues grow into appetites?—I dont know. That seems too hasty a conclusion.—Did you never hear of a hunger and thirst after righteousness?—Yes, ex Cathedra.—Are not hunger and thirst appetites?—Undoubtedly.—And are not that hunger and thirst virtues?—That nobody can deny.—Did not Plato tell you that Thalassian Venus grafted many scyons upon the wild stocks in Psyche's garden?—I remember it very well.—And Urania grafted more?—He said that too.—And you allow that after taking strong hold of the stocks, they become appetites?—We may allow that of the rest, as well as the hunger and thirst you mentioned.—Then Psyche having so many appetites, natural and acquired, need never want a whet to action of every kind.—Why no, it should seem she need not.—Did you never know these last-mentioned scyons run luxuriant, and shoot into extravagances?—We have numberless instances of that below in our methodists, devotees and very sentimental super-refined ladies.—But tell me now from your own experience, for you have some of those scyons in your own garden.—Some

few, I hope, but feeble enough, God knows. —Well, but feeble as they are, did you never observe them sprouting into an extravagance? ——Sometimes, to my shame be it spoken.— What do you think put you upon observing it?—The whispers of the Demon.—Since we have agreed there is such continual incitement to action of all kinds by the appetites, what has the Demon left to do unless to dissuade when any of them urge to things improper?——Nothing else that I know of. But now you have convinced me there are several voices within us, how shall I know the voice of appetite from that of the Demon?—Did you never perceive a difference in the voices you hear?—One recommends to good, the other to pleasure.—That is not it: for good and pleasure are sometimes the same, and appetite often urges to good, But do not you perceive the voice is sometimes quick, eager, vehement, and clamorous, at others sedate, soft and gentle; that sometimes it impels to gratification, at others, checks and restrains? And do not you think these the proper marks to distinguish between them?

45. But come, now, answer me once more. Do you remember when the Thalassian Cupids sported round you, before they were disciplined in the school of Hymen?—Ay,

as

as well as if it were yesterday.—In those days, if you chanced to walk in the Park and were told Euridice was there, have you not sometimes run eagerly after some other person at a distance dressed like her?—Those accidents would happen now and then.—And after the Uranian Cupids came to inspire you with a love of mankind, have not you run almost as eagerly after some shining truth that appeared self-evident?—Many a time and oft.—Or to come with the force of demonstration?—Yes.—Or some useful and important discovery?—Ay and that too.—And in those cases did you never hear the whisper?—Several times.——You said that upon such admonitions you revise the thought over again. What follows thereupon?—Generally I find the appearance fallacious or the discovery trifling.——But before the whisper you knew the truth, the demonstration, and the use for certain?—As certainly as any Knowal.—And after the revisal you knew that you did not know it?—I did.—Then since you have this way to learn the science of ignorance, why do you come to me to teach you, and not rather apply to the Heaven-born Teacher sent down on purpose from Jove?—I see, says I, you have a very peculiar turn: you will not give a man a drop of drink if he be ever so dry, but you lead one

round through a number of intricate mazes to the fountain where one may quench one's thirst.

But I want your assistance upon occasion of a voice I hear just now.——Which sort was it?——Oh! the eager and clamorous.——What did it say?——That I should make a visit to the Founder.——What says the still voice?—Something, but I cannot tell what.—Cannot you tell whether it says Forbear?—No, that is not the word I am sure: nor can I make out any other.——Shall I try my Demon? They all speak the same language, though they are not equally heard by every body. Oh! now I have it.—Well, what does yours say?—Mine says listen.——Oh! that is that we should be attentive not to drop a word of any thing the Master delivers.—No, that would have come from the other voice. You know the Demon never impels, but only checks.—What does he mean then by Listen?—That you should not pick up every thing delivered, but listen carefully to himself in case he should whisper the word Offence.—I'll do as well as I can, but sometimes my ears are a little dimmy. Oh! now I hear the loud voice again urging me to go this minute.——What says the other?—He is quite silent.—So is mine: therefore get ye gone, there is no time to lose.—But will not you

you go with me? I am loth to lose your agreeable company.—The Demon will not let me, but he gives my scholar leave: he has an interest with the Master by means of his disciple Timæus.—Then Plato offered his service in the politest manner imaginable: Locke took me in tow, and after taking an amorous leave with By'e sweet Socrates, and By'e little Searchy, remember me and my Demon when you go down to earth again; we parted to set out for the school of the Samian sage.

46. My conductors informed me as we went along, that Pythagoras generally resides in the intermundane spaces, for the convenience of hearing the music of the severa spheres on all sides of him in full concert: but he was now come down upon some particular occasion below the orbit of Mars, so we should not have a great way to go. This was all the discourse they had with me upon the road, for the rest of the way they entertained one another. I could not hear the particulars of their conversation but found it turned upon forms and ideas, which Plato seemed to hold as unproduced and existent from all eternity in the Divine Mind; and that the forms in bodies and ideas in created minds were copies of those archetypes, similar to impressions made in wax by a stamp.

Locke

Locke could not admit them to be unproduced for that, he said, implied two principles, an unsentient nature to whose impressions the Deity must be passive: nor could he conceive that every time a man moulded a round piece of wax into a square, or entertained ideas of theft, adultery, or murder, these alterations were impressions made from archetypes in the divine mind. Their debate was carried on in a friendly manner without the least warmth or acrimony, and at last they agreed those subjects were too deep for them to fathom. They then praised God who had given his several creatures capacities sufficient for their respective uses, if they would but make a good use of them, and placed out of their reach only such points as were merely speculative.

Scarce had they made this reflection before we arrived at the place of our destination. We beheld the venerable Father of Philosophy dictating his precepts to a crowded audience with the authority of a magistrate. He appeared in a human form, like that the painters have drawn for Olympian Jupiter: his locks rising in large curls, his eye-brows thick and dark, his aspect majestic with the solemnity and mysteriousness of one who had been used to govern an ignorant and barbarous people. I looked earnestly for his golden thigh,

thigh, but his robes, made I suppose of ærial woof, covering him quite down to the feet, I could not so much as see whether he had a golden toe. On Plato appearing, the obsequious crowd gave way, and he whispered Timæus that here was a stranger just arrived extraordinarily from earth, whose stay was very short, who had come upon the recommendation of Socrates, the son of Sophroniscus, with an earnest and humble desire to receive some sprinklings of his wisdom to carry down for the benefit of morals below. As soon as Timæus delivered his message the sage gave a gracious nod, like that wherewith Jupiter shook Olympus, on granting the request of Thetis, and with something like a smile began.

47. Adore the sacred Quaternion: the Quaternion containeth under it One, Two and Three; but One, Two, Three, and Four compose Ten, and from Tens are all higher numbers produced. The Quaternion Four alone is One and uncompounded. One had no father, but One produced numbers, and numbers are all things. One is unchangeable, but numbers generate numbers, they fluctuate and migrate into one another: yet they perish not, neither was there a time when they were not. Whatever creepeth, or walketh, or swimmeth, or flieth, or thinketh,

was

was produced by the first numbers, and the first number subsisted by the power of One.

Hearken unto me for I am ancient; I was Panthoides Euphorbus at the Trojan war, slain by Menelaus fighting in defence of my country; yet he could not destroy me nor hurt my country, neither remove me from it. I have known all things except One, but One is inscrutable.

Revere the Oath, for the Oath cometh from One, and bindeth all things: it cannot be broken, neither is it good that it should be broken.

Stand firm upon the golden thigh: let that be thy support: nevertheless use also the thigh of flesh when thou goest forth among men.

Purify the ears of thine understanding that thou mayst hear the music of the spheres, for their harmony is melodious to the adepts, but the vulgar hear not their sound.

Worship the immortal Gods according to the rites of thy country: for the same Gods made the wise and the ignorant, and thou thyself, if thou hast a thigh of gold, hast also another of flesh, neither livest thou for thyself, nor by thyself.

48. The gaping crowd listened with a kind of stupid astonishment. Some still held their mouths open, as if not knowing whether the Master had done or not. Timæus, Charondas,

Charondas, Zamolxis and the adepts, seemed all the while thinking on something else. Plato, like a compleat courtier, joined with the many in expressions of wonder and admiration. And Locke, having observed something in my countenance that excited him strongly to laughter, was forced to draw in his head a moment for fear of scandalizing the company. But as the vehicles have a great command over their imagination, he very soon thrust it out again, and asked me with a very grave face, Whether I did not find myself prodigiously illumined. Illumined! says, I; ay, with such a glare as dazzles me quite, for I can see nothing. I am as much mortified now as when Socrates played me off with his irony. Certainly great grandpappa sees I am a degenerate brat, not fit to be trusted with a little common sense, that he puts me off with his Rosycrucian jargon. Why I know no more what he has been talking about than the man in the Moon. Oh! says Locke, this is only the bark: perhaps we may get the pith by and by. He always talks mysteriously till he knows people very well. I fancy they have given him an imperfect account of you: but I will try to get speech with him if I can to set matters right.

He then by the interposition of Plato and Timæus

Timæus requested a private audience. The Master bared his bosom that Locke might apply his vehicle, and they had a conference together in the sentient language: after which, the Master, first mumbling a few words to himself, such as Light of Nature; microscope! Mundane Soul! One self-existent! cried out with a loud voice. Hence ye profane. Let not the uninitiated approach the sacred mysteries. Ye that are pure in heart and clean in hands draw near; that have kept the five years' silence: that have lifted up your minds above the earth upon the wings of contemplation: that have cleansed your mental eye from the films of superstition and obstructions of self-conceit, so that it can bear to look against the light.

Come, says Locke, now we may expect something a little more intelligible: he always makes this preface before he brings out his esoterics. As soon as this edict was pronounced, I perceived a great bustle among the company: all who where conscious of not being adepts slunk away one after another and our number dwindled strangely. Seeing some of great repute below both for learning and piety march off, and fancying somebody whispered the words Mallebranche, Dacier, Practice of piety, Beveridge, Whole duty of Man, as they passed, I thought it decent to withdraw

withdraw too; but it was out of my power, for having not yet learned to go, I was forced to lie wherever my nurse laid me down. Locke observed my perplexity. Prithee, says he, do not be disturbed: this lecture is on purpose for you. I told him you had kept more than a five years' silence, having never spoken till you were above fifty years old: that you had conversed with bigots and free thinkers, without being perverted by either, and that you had been initiated in the mysteries. Thank ye, says I: but I wish you could prove your words true. Hush! quoth he, the oracle begins to break forth.

49. Attend and learn. The Quarternion is the holy Tetragrammaton, the same awful name variously pronounced among the sons of men: whether Jeva, Isis, Jove, Θεος, Zeus, or Deus; or in modern times, Tien, Alla, Dios, Idio, Dieu or Lord; for these are all Tetragrammata. I speak not of Olympian nor Dodonean Jove, nor him the son of Chronos, but of the Uranian, whose offspring Chronos was. Uranian Jove alone is One, unproduced, without father, containing all powers within himself. All things beside are numbers: the Mundane soul is a multitude: the immortal Gods are portions thereof: the bodies thou seest are divisible into numberless atoms: men and animals are the

the divine particles mingled with lumps of clay; our vehicles contain a number of threads and fibres.

Jove produced the two first numbers, the Mundane soul and Hyle: he made Hyle inert and stupid, but to the Mundane soul he gave activity and understanding. They both depend on him for their Being and subsistence, nevertheless, there was not a time when they were not: for an effect may be as old as the cause, yea must be as old as the concurrence of all the causes requisite to produce it. Their production cost Jove no time nor trouble, nor did he from everlasting want power to produce them. Love or glory moved him to the work, but Jove is unchangable, nor has there been a moment in all eternity wherein he was destitute of love or glory. Those two first numbers extend throughout all the immensity of the universe, but Hyle bears no greater proportion therein to Soul than the drops in a cyathus to the waters of the ocean.

Jove from everlasting disposed Hyle into certain characters expressive of his Will, which the Mundane soul reading therein, gathered the portions of Hyle dispersed up and down, into regular systems and worlds, formed thereout organizations of men, animals, insects, and plants, and lodged in each of

of them a particle of its own substance. Hence it is that men and animals perceive, and see, and feel, and act: for Hyle, however nicely arranged, can neither perceive nor act, but the particle of divine air enclosed therein perceives and acts according to the objects exhibited, and instruments at hand for it to employ.

The Mundane soul is homogeneous throughout, therefore the divine particles drawn from thence have all intrinsically the same nature, and stand differently capacitated according to the finer or grosser contextures of Hyle investing them: for the various degrees of percipience, sense, or rationality, arise from the action of Hyle upon them. If thou doubtest of this, consider what the brightest genius could do confined within the dull organs of an oyster: why then shouldest thou impute the stupidity of the oyster to its natural incapacity, rather than to the darkness of the habitation wherein it dwells? or how canst thou pronounce what the sentient principle of the oyster might not perceive if it had all the ideas of a man to survey? In plants there are channels of perception, but no instruments of volition, so their activity lies dormant in them: neither do they feel pain upon amputation of their limbs, for pain would be useless as warning them against mischiefs

mischiefs they cannot avoid. And they have different mundane particles in the several parts of their composition, so that there may be one for every offset planted from them.

But thou, O man, who pridest thyself upon thy reason, and expectest to be raised one day to the intelligence of an angel, wilt not conceive that a creature like thee can be debased to the condition of an insect or a vegetable. Reflect with thyself what thou art when asleep, now little better than a stone, insensible and motionless like that. What wert thou in the cradle? sleeping, feeding, and crying, with less signs of rationality than the brutes thou despisest. What wert thou in the womb growing like a plant from the umbilical root, and receiving a few perceptions but performing nothing. The modern discoveries of animalcules by the microscope show, that before conception thou wert a little frisking worm, of less consequence in nature than the pismire and the mite.

50. The Mundane soul read in the characters inscribed by Jove, that there should be various states of life, various forms of Being, and prepared and sustaineth them accordingly: some with a mixture of evil, and some yielding nothing else. Individuals change, but the species remain constantly the same: and as the systems they inhabit are broken up,

up, others are formed for their reception. The divine particles migrate from the Mundane soul into those states, each taking his turn in rotation that the fate of all may be equal: and he that passes through a more inconvenient state at one migration, takes the better at another. But as the particles in the Mundane soul are infinitely more numerous than those immersed in Hyle, they pass millions of years before it comes to their turn to migrate again, and all that interval they remain happy and immortal. For though the continuance in some of these states be an eternity to the spirits inhabiting them, who know nothing of their Pre-existence, and scarce any thing of their Post-existence, yet the Mundane soul, to whom a thousand years appear as one day, looks upon these migrations no more as a suspension of its immortality than a man esteems the suspension of enjoyments by a night's sleep a discontinuance of his life. Thus life is a journey through the vale of mortality, but the deliverance from Hyle a return home and resurrection to immortality again.

Therefore the Mundane soul, having found permission in the characters written by Jove, contrived to shorten the passage through Hyle as much as possible: many children escape from the cradle, and bringing no concretions into

into the vehicular state, obtain their advancement the sooner: many fœtuses never come to the birth, and multitudes of animalcules never arrive to the stage of a fœtus: these all regain their native seats directly, without passing through any other forms. The migration is not out of one species into another, but each species contains several stages: for the divine particle or Psyche, upon being first discerped from the Mundane soul to immerge into Hyle, receives a fine integument thereof; wherewith being enveloped she becomes an animalcule. This is her first stage, and many times the integument bursts before she arrives at any other: if it does not, she roams about until she finds a proper nidus wherein she nestles, whereto adhering and uniting as a part of the same composition she becomes an egg, or a fœtus, and the fœtus being in due time excluded becomes an animal. If the nidus being young, the adhesion close and strong, it chances to be dissolved by some disease or accident, it tears open the fine integument too, and sets Psyche at liberty: but if the animal holds out its period of life, the integument gradually loosens, and disengages itself from the gross outer covering, and upon dissolution thereof issues forth entire, but a little altered in its contexture, and distended so as to be incapable of re-entering a nidus of the same or any

any other species, and remains naked without any covering of the grosser Hyle for an appointed time, which is the last stage of the journey. But in whatever stage the first integument breaks asunder, Psyche becomes reabsorbed into the ocean from whence she sprung. Therefore the most desirable thing for Psyche would be not to have been born at all, and the next desirable to have died as soon as born.

Nor think thou, vain man, that thine is the most favoured state, or that thou alone hast an interest in futurity. Knowest thou not that some animals drag on a life of labour, pain, distress, and misery? which thou canst not say they brought upon themselves by the abuse of their indifference; for this thou claimest as a privilege peculiar to thyself. Does not then the justice, the equity, the goodness of Jove require, that amends should be made them elsewhere? Psyche wishes most to pass through the species of short-lived animals, that her return may be the sooner: therefore the Mundane soul has provided infinitely greater multitudes of them than of the human and longevous. Thus Psyche has many short excursions to one long journey: for she must migrate successively through the several species of insects, animals, and men,

savage or civilized, but after immense intervals between each migration.

51. I was Panthoides Euphorbus who fought in the Trojan war: not that sung by Homer, but another in another world innumerable ages before. The spear of the younger Atrides could not destroy nor remove me from my country, but advanced me one step towards it: for my country is the Mundane soul. During my long residence there I contemplated the Universe: I surveyed the systems, their order, and courses: mine eye penetrated into the minute portions of Hyle, their properties, and operations. I comprehended all things, all except the One: but the One is inscrutable, dwelling in unaccessible light, whither the intelligence of numbers cannot approach. Nevertheless, I beheld clearly the image of his splendor in the characters marked upon Hyle, in the powers and excellencies of the Mundane substance around me.

52. Reverence the Oath, for it is the Oath of Jove. Hast thou not heard how Jove made a covenant with man, that day and night, summer and winter, seed-time and harvest, should never fail? This is but one article of the covenant which the One made from everlasting with the first numbers: and he confirmed it with an oath: but having none

none greater to swear by, he sware by himself. As I live, saith the One, my order of succession shall not fail, neither shall my words pass away. Am I a man that I should change, or the son of man that I shall repent? Behold now, the laws of nature which I have established, they shall not be broken: the mazes of fortune I have planned out, they shall not be obstructed: the measures of good and evil which I have set, they shall not be altered. Systems shall be formed and dissolved again, each succeeding the other: various forms of Being provided, the number and length of their stages, with every thing befalling in them, duly regulated by the courses of nature and fortune: the Mundane substance assigned its proper migrations after stated intervals.

If I have interspersed a small portion of evil among my works, it is for the greater good to redound therefrom: for as I live, saith the One, I have no pleasure in the sufferings of my Numbers, but that they should enjoy and praise me for their Being. I have contrived my Order in wisdom and loving kindness, and directed my second causes to operate ultimately for their benefit. This my percipient first number knoweth, and obeyeth my voice gladly. When Psyche lies immersed deepest in Hyle, I afford her such lights

through the chinks of sense and appetite as direct her to serve my purposes unknowingly: if I open the windows of reason, then Phyche can discern good and evil, and I leave it in her power to choose between them; nevertheless, however she shall choose, she cannot defeat my designs, but promotes them when she least intends it, for I compass them secretly by ways she knows not of. I govern all things above and below, Hyle by impulse, the Mundane soul by understanding and motives: I know certainly how every cause will operate, so that nothing falls out contrary to my Will. I have reserved the dispensation of evil to myself, for I alone know how to produce good out of it: let not Psyche presume to interfere with my prerogative.

If any provision of nature terminate ultimately in evil, I will interpose in good time with my almighty power for the deliverance of Psyche; but let her beware how she brings evil upon herself or her fellows, for though offences must needs come, woe be to them by whom they come; for I have marked out a secret path in the courses of nature, by which Nemesis shall overtake them, and overwhelm them with greater evils than they have occasioned; and the slower the steps of Nemesis are, the larger flood will she gather. Attend, O, Psyche, to the terms of my Oath: where thou

thou understandest them not, I will not be severe to mark what is amiss, I will even bring strength out of thy weakness, wisdom out of thy foolishness, and success out of thy misconduct; but where thou discernest whither they direct, Reverence and Obey, lest mischief come upon thee.

53. Thus said the One: and it behoves Psyche to observe diligently what nature requires, especially her own nature, and examine to what uses her several faculties are applicable. The faculty of reason she will find eminently precious and solid above the rest, as gold is above other metals. This then is the golden thigh, whereon only thou mayest stand firmly: let this therefore, be the support of thy meditations, the basis of thy conduct, the pillar whereon thou raisest thy schemes: nevertheless, when thou goest forth into the world, use also thy thigh of flesh, that thou mayst walk with freedom and conform thyself to the motions of others.

When retired from the noisy world thou standest upon thy golden thigh, thou mayst contemplate the regularity of the heavenly systems, their complicated motions, swift and slow, making an admirable harmony, singing forth the praises and magnificence of Jove. Thou mayst then turn thine ears upon earth and observe how the discordant passions,

sions, jarring interests, and opposite views of men combine to maintain order in communities, and work agreement out of that which seemed the most unlikely to produce it. Thou mayst attend to the windings of fortune, wherein events appearing the most harsh and grating to your wishes, often terminate in a perfect concord and unexpectedly bring on a close most contenting to the mind.

54. Worship the immortal Gods according to the rites of thy country: let this be thy general rule, nor admit thou exceptions without urgent cause. Rites are indifferent in themselves and may be turned as well to good as bad purposes: popular doctrines are for the most part figurative, and may by proper interpretation be accommodated to sound reason. The same Jove made the adept and the ignorant; he careth equally for all his works; he gave forms and ceremonies to the vulgar: do not despise what thou thinkest needless to thyself. Yet neither be they wholly needless even to thee, for if thou hast a thigh of gold thou hast also another of flesh, a vulgar part in thy composition: nor is it given to mortal Psyche to guide all her steps by reason alone. Remember, thou livest not by thyself nor for thyself: if thou hast knowledge keep to thyself that which would hurt another: dispense to every one discreetly what will do him

him benefit, and in a manner he can understand and relish: delight not to thwart the conceptions of others, but turn them gently the way that will be most advantageous to them: neither regard the lawful only, but also the Expedient.

55. The Master then withdrew himself into his vehicle, gathering his vestments around him; so that he looked like a portmanteau lying under a heap of cloaths. Plato, after making a handsome compliment to Timæus for his good offices, told us we had nothing more to do but return home again. So we set off directly, and as I expressed a desire of conversing with them upon the way, they contrived a method of carrying me, by which I might do it more commodiously: for taking me each under one arm they placed me in the middle on a level with themselves. In this manner we went on, all three making one compact body with two legs only for steerage of the whole: Plato skated upon the right hand ray, and Locke upon the left. I asked Locke whether he intended to send down all he had heard to Gellius. Ay, to be sure, says he. Why not?—Nay, says I, only because I thought two or three times while the Master was speaking that the Demon whispered Offence.—Well then, says he, tell me those passages where you heard the whis-

per,

per, and we will leave them out. Come, why do not you begin?—I was going, says I, but he checked me again. I do not know what to do, he puzzels me so with contradictory directions. It is my opinion, says Locke, that we send all down, but that you reserve them for your private use until you can get some friends to consult their Demons, who perhaps may be more explicit. Oh! now, says I, he says Listen.—Very well, says Locke, that is a sign we are to follow our impulse for the present, only holding ourselves upon the watch for future admonitions.

56. I then desired, the Demon not forbidding, to know whether I might not be introduced to some of the Apostles. No, says Locke, that you cannot, for they, having gone through severe trials below, were all advanced long before I came up. Perhaps my partner may tell you something of them. They did not much care to converse with us, says, Plato, for they could not quite get rid of that shyness remaining from the notion they had first entertained below of our being reprobates and unclean, before Peter's vision of the sheet taught them otherwise. The last who staid was the Cilician of Tarsus, detained by some acrimonious concretions he had contracted before his initiation. He could not help

help sometimes cursing and calling names: if any body vexed him he would say, Thou has done me much wrong, the Lord reward thee according to thy doings; or at other times, God smite thee thou whited wall. Upon one of us asking him civilly to explain what was a spiritual body, he replied, Thou fool, that which thou sowest is not quickened except it die. I tell thee there is a natural body and there is a spiritual body.

He had great knowledge, but no very happy facility in expressing himself; so though he was fond of disputing among us, we were very little edified, for he talked in a language peculiar to himself; till we put him in mind of his own rule, Become all things to all men, if by any means thou mayst gain some: he then began to conform himself to our ideas and figures, and when we could understand him we learned a great deal from him. He then owned that he had received heavenly gifts in earthen vessels, and though the liquor was not at all impaired thereby in substance or virtue, it might get some twang of the vessel. His education at the feet of Gamaliel led him, and the general taste of his countrymen obliged him, to deal in far-fetched, extravagant figures, which as that taste subsided, lost all resemblance with the things signified,

signified, but were understood literally, thereby leading men quite wide of his meaning involving them in useless subtilties, inextricable difficulties and endless disputes. If he had staid among us till my brother Locke here came up, he would certainly have been a great favourite with him. I am persuaded he would have said nobody understood him so well since his own immediate scholars.

I flatter myself he would not have disapproved the thoughts I delivered when you first did me the honour to consult me. Perhaps he might have enlarged a little further, for besides the two celestial Goddesses I spoke of, he would have added two more, a pair of twins named Eisorosis and Pistis. Eisorosis, he said, remained always above to attend upon the Gods, and Pistis always below to succour mortal Psyche. She was of enormous strength, capable to remove mountains; and invincible courage, so as to pass through fire and endure tortures without changing countenance. When the car was overturned and Psyche dragged amongst briars, stones and mire, he said no other power could rescue her besides Pistis; for Urania would not descend unless called by her. While Psyche holds fast upon her, no perils can hurt, no terrors dismay her. She carries an Eisoptron which,

which, whenever Psyche looks too earnestly upon the ground, she holds under her and gives her by reflection therein a glimpse of the Glories above. He would not have omitted the golden anchor, only differed a little from us in the shape, for he said it was made like a cross, such as was used for the execution of malefactors, and that the three Goddesses mounting Psyche thereon proceeded with her through the Vehicular regions until they came to the gates of Heaven; where Elpis and Pistis, delivering over their charge to Eisorosis, descended again, but Urania entered with her into the blessed abodes. This Pistis was a great favourite of his and he lamented grievously on hearing accounts from below that mankind had worshipped a counterfeit in her stead.

The Pseudo-pistis was a most furious power, imperious, violent, and cruel, carrying scourges, swords and firebrands, to take vengeance of any that but dared to cast a disrespectful look upon her. She showed frightful images of dungeons, flames, and spectres, in her Eisoptron, and while Psyche was terrified in looking at them, she picked her pocket and sometimes stripped the cloaths off her back. She practised a thousand frantic tricks and absurdities till she became a laughing-stock to the scoffers. He said she might easily

easily be distinguished from the genuine, being always accompanied by ambition, tyranny, vanity, avarice, luxury, or some of the infernal train: whereas the true Pistis never appeared far asunder from Urania. And she did every thing by dint of arbitrary command, obligation, fear, and terror: whereas the real Pistis employed fear only as an instrument to work the beginning of wisdom, but when Urania took possession of the car, fear was banished quite away.—What then, asked I, do you think he would have said of our modern methodists, who pretend to quote him for their assertion that, provided a man believes himself one of the elect, it is not a farthing matter what his morals are? Perhaps, replied Plato, he would have answered, Thou fool, knowest thou not that faith is manifested by works, as the tree by its fruit? and that health of mind as well as body is preserved sound by constant exercise of outward actions? Socrates used to be much delighted with his description of the Uranian Venus.—I do not doubt but you remember it. Pray, says I to Locke, where is that? In the thirteenth to the Corinthians, says he.

57. The obliging Gentleman-philosopher proceeded to some other of his doctrines, which he explained after his own manner: but

but the ancient style and philosophy differing a little from the modern, I could not always comprehend him, till Locke explained them further in a manner accommodated to the present Theory. I would gladly relate what was said by them both, for the Cilician, doctrines interpreted by philosophers cannot fail of being very curious and instructive; but to my great regret I cannot recollect it yet. For Gellius, finding my sensory fill apace and not knowing how much more there might be to come, interlined these discourses, which he, being a heathen and a man of weak judgment, looked upon as matters of no great importance, in very small characters between the former writing: so that the inner membrane I carried with me being not yet fallen into the fine strokes of these little letters, I cannot possibly read them. But perhaps some time or other it may have worked in so that I may discern them plain enough, if not to transcribe, at least to recover the main sense and substance of them.

The next legible writing recounts that Locke and I, having dropped Plato at the Grecian quarter, came back to the place from whence we set out. As we passed along, after thanking my patron for the favours he had procured for me from the ancient sages, I added that if it was not trespassing too much upon

upon his goodness I would beg an introduction to one of the moderns. Whom would you see? says he. There are but few of them within reach: for being new inhabitants here, they are gone to visit the regions round about; as your young gentleman below are exhorted to travel for the finishing part of their education. Newton is run after the great comet that appeared in 1685 to try the justness of his calculations upon its trajectory. Huygens has undertaken a longer journey to measure the distance, magnitude, and brightness, of the Dog-star. Theory Burnet set out upon a visit to Jupiter, as being an earth in its antediluvian state. He wants to peep into the great hole Astronomers observe there, in hopes of seeing the great abyss beneath, and remarking how the earth stands in the water and out of the water. He then goes to Saturn to examine whether the ring be not a part of the paradisiacal crust not yet broken in. Whiston is engaged in a wild-goose chase among all the comets, to find which of them will bring on the conflagration, that he may calculate precisely in what year the Millennium begins, wherein he is to be chief Messenger, Arch-bishop, Metropolitan and Primate of all the new earth. And the rest, almost all, are dispersed abroad, one way or other, in quest of some discovery hitting their fancy.—Oh! says

says I, it was none of those you named: though I should like well enough to have a conversation with them, but we shall not have time for every thing. The person I thought of was the famous German professor Stahl. —That is lucky, says Locke, for he being of very heavy flegmatic temperament, has not learned to go yet, so we shall be sure of finding him at home.

But what can you want with him? Sure you do not design to study Physic at these years.—No, no, says I. I know no more of that science than Socrates's one thing, and if I should dabble in it now, I might lose that single point of knowledge and chance to quack myself into distempers. But as he has joined natural philosophy with medicine, I was curious to try whether some improvements might not be gotten from him, and have read so much of his True medical Theory as relates to subjects in my way; as likewise his controversial tract, entitled the Idle Business, alias the Shadow-fight: but can make neither head nor tail of them. Yet I am the less mortified because I find other people cannot agree what his opinions were, and therefore some of them must have misunderstood him. Boerhave makes him hold, that the mother's imagination forms the fœtus. Hartley, that the fœtus forms itself, and

that

that all our automatic motions were originally voluntary actions of the child. His antagonist in the Shadow-fight, charges him with believing the soul divisible, for which reason the pieces of an eel cut asunder continue to wriggle because there is a bit of soul left in each of them. And, to my thinking, he allows nothing automatic even in the grown man, but that we place the particles of our daily nutriment every one in its proper station by our own Will: particularly in his section upon the Sphacelus, where he seems to ascribe the spreading of a mortification to the laziness of the mind, which withdraws her activity from the sound parts adjacent, and so lets the putrid humours continually gather ground upon her. Now I love always to go to the fountain head, and should be glad to know from his own mouth which or whether any of us be in the right.

Well, says he, I will carry you to the conference to humour you, but question whether you will be much the wiser for it. Your desire of recurring always to the spring head is commendable, but I cannot promise you much benefit here: for our spring runs ice rather than water, that one had more need bring a hatchet to cut out a slice than a pitcher to draw with. For as Plato told us just now of a better man, he has no happy facility

facility of expressing himself: besides, he is not a very conversible creature, having brought up hither plenty of grumous concretions and fæces of cysticbile, which make him sullen, peevish, and fractious. You must behave very respectfully, seem to comprehend him whether you do or no, and contrive if you can sometimes to imitate his language without mimicking it: it will please, and perhaps make him more communicative. He has a large fund of honest industry and indefatigable zeal for the good of his fellow-creatures, which will prevail at length over his concretions, discharging them gradually with the help of our needles; for true hearty charity will cure as well as cover a multitude of sins. The faculty below hold themselves much obliged to him for many useful improvements he has made in the science. So you must learn not to think meanly of a man that has any valuable talent with a right disposition to use it, because he cannot make a handsome bow, nor run ye off an elegant period.—Oh! no, says I, the solid always carried the preference in my estimation before the specious. Yet methinks the example you have just now laid before me, is a further justification of my aiming to get assistance from the polite arts for lifting up my profound speculations nearer the com-

mon surface, that more people may be capable and willing to pick them up.

58. But since I presume we have still some length of way to the end of our stage, give me leave to ask who is that antagonist whom he bumps and pummels so furiously in his Shadow-fight, for he never calls him anything but Mr. Author.—That, says Locke, you might have known could be none other than Leibnitz, by his claiming the first thought of a pre-established harmony.—What! says I, that veteran polemic who battled so long with Dr. Clarke? Indeed he shows himself the better disciplined soldier of the two in the Shadow-fight, and handles his arms much cleverer, at least so far as relates to the style.

Pray, has not he an adopted family among you? for two of our countrymen, Hartley and Berkley, visibly derive from him, besides the foreigner Mallebranche.—How so, says Locke, did they maintain his doctrine of pre-established harmony?—I do not say that, replied I, but they broached opinions which might naturally result from it. For he laid down for his foundation that spirits being Monades and matter infinitely divisible, there was no proportion between them, and therefore it was impossible they should in any manner affect or operate upon

one another. No doubt he overlooked the horrid consequence that must follow from thence, namely, that neither can God himself operate upon us: for though he be a Monas and we are Monades, yet there can be no proportion between that which fills all immensity and that which lies circumscribed within narrower limits than imagination can define. However, upon this foundation he concluded there must be two courses of Providence established, wholly independent on each other, governed by separated laws: one for the motions of matter, by a necessary chain of causes and effects, the other for the perceptions of spirit by an unalterable succession of ideas: but both so admirably contrived as in every step of their progress, exactly to harmonize and correspond with each other. So that when upon finding myself cold I go to stir the fire, I can do nothing to make it burn, nor does it contribute anything towards warming me; but a convulsion seizes my arm, which makes it mechanically catch hold on the poker and fall a poking: in the mean while a correspondent series of ideas introduce one another in my mind; for my coldness ushers in the idea of taking the poker at the very instant when the convulsion seizes me; as the coals burn briskly, though I really see nothing of them, I have

an idea of a great blaze in mine eyes just when the flames begin to mount; and in consequence of this, but without being anywise affected by their heat, comes the idea of feeling warmth.

From thence Hartley seems to have drawn his notion of the mechanical necessity of all human action: but he follows his original only half way, for though utterly rejecting any operation of spirit upon body, yet he allows body to operate upon spirit, and asserts that our ideas are all brought us by the vibratiuncles of a material ether.

Berkley will have it that spirit neither acts nor is acted upon by body, therefore not unreasonably denies the existence of matter as a thing wholly useless. For what need I have an arm by my side or coals in my grate, if I have no power to do any thing with them, nor they of affecting me in any manner; and if they do not bear the least share in exciting those ideas of poking, of seeing a blaze, and of feeling warmth, which follow in succession by laws of their own? Nor is it probable that God, who does nothing in vain, should create a material world to be of no use to his spiritual, for whom he had provided other laws for bringing forth all the good and evil he fore-ordained should fall upon them.

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As those two gentlemen were certainly good and pious men, it is much they did not reflect that their doctrines must be utterly subversive of all religion, morality, and even common prudence. What encouragement or what room is there to aim at attaining a right tenor of conduct and sentiment, or exhort others to the like? since endeavours we can make none, but must wait contentedly for such thoughts, opinions, desires, and designs, as it shall please God to send us, either by the ministry of vibratiuncles or by the pre-established order of succession among ideas.

And the system of the latter does great injury to two of the divine Attributes: for the corn, the fruits, the plants, the variety of provisions for our sustenance, our accommodation and our enjoyment, the wide-extended Ocean, the realm-bounding mountains, the immeasurable expanse of heaven, the numerous host of Suns stationed at immense distances bespangling our night, are striking evidences to us of the power and magnificence of our Creator: which evidences will be utterly lost, if the Suns, the heavens, the hills, the seas, the animals, the vegetables, have none other existence or reality than in our own deluded imagination.

Then for Wisdom, the very essence of that consists

consists in the apt disposition of causes for producing effects; and is displayed by the admirable contrivance apparent throughout the natural and moral world, wherein jarring elements, an endless variety of differently qualified bodies, incompatible interests and discordant passions, co-operate to maintain regularity in nature, society and good order among mankind, bringing forth unerringly their destined events by a thousand successive gradations, and through a thousand intricately-winding channels. Whereas there is no wisdom in stringing a succession of ideas, for this depends upon arbitrary Will and pleasure. The idea of a plentiful harvest, had God so pleased, might as well have succeeded the idea of a cricket match as the toils and cares of the husbandman. And the ideas of health, activity, and enjoyment, might as naturally have flowed from the idea of sawing a block of marble into slabs as from that wonderful structure of bones, muscles, bowels, vessels, fibres, in the human body discoverable by dissections of anatomy. Thus the Maker of this stupendous universe is debased to the character of a fanciful poet or romancer, occupied solely in leading imagination along an endless variety of trains, which have no truth nor Being elsewhere than in our ideas.

Never-

Nevertheless, in dealing among these and such like persons in deep speculation, I have observed one particular in confirmation of my own sentiments, that they all in general (for I will not except Stahl, because I do not believe he ever thought of cutting the soul of an eel in pieces) seem to hold that every perceptive Being must be a true individual; and that every compound or divisible substance, such as are all the bodies falling under our senses or knowledge, is not one thing but a collection or aggregate of many.

59. I do not know whether my patron attended to my prattle: it is best for my credit to suppose he would not interrupt me for fear I should not have time to say out all my say: for I had but just vented my last shrewd observation, when I found we stood still close by a bag which looked more lumpish and made of coarser stuff than any I had seen. There, says my guide, there is your oracle. Perhaps I may not get you an audience now you are come. He gave it five or six gentle taps and hallooed to it as many times; but nothing ensued. Pray, says I, had not you better talk to it in the sentient language? He does not understand that, says he, though we can understand him plain enough: for he has a wonderful propensity in thrusting his own notions upon other people, but as great backwardness

wardness in receiving theirs or even enterin into their meaning. Suppose, says I, you should give him a good hunch with your foot. That will not do, says he, our vehicles are so light and the resistance of ether so small I should send him a bow shot from us: and it would be an odd way of asking a favour, to kick a man about like a foot-ball till he grants it. So he thrust out two brawny arms, and gave him a lusty punch on the opposite sides, that the force of one might counteract the other. We then heard a grumbling voice mutter out. Who are ye? What do ye want? Let me alone.—Do ye think to foist, or like the Plautine Sosia, fist your notions upon me? Your skirmishing parties, call them cohorts or cow-hearts, shall never drive my statarianly disciplined battalion from its ground. Why, your infinitely-infinite monades in infinitely-never single bodies, producing upon a thing non-existent a non-existent effect, cannot get the better even of my light armature, my skipping scampering hussars, yea, with Parthian dexterity pugnacious even in flight. Locke whispered me. Now he is dreaming of Leibnitz all this while. And then addressed the shadow-fighting champion in these words. Celeberrimous Doctor, sole master of medical science, we mean no attacks either upon your battalion

or

or light armature: they are too respectable a body. You know my voice, that I am not Mr. Author nor one of his adherents. I have made bold to bring a new adopted son of mine to beg a detachment of your statarian soldiers to escort him into the regions of physiology and pathology.—A commendable attempt! says the bag, yea a laudable, not to say, noble ambition! But what need he plague me? Is not my True Theory to be had? He may learn there every thing that is to be learned.—He has had recourse to that, says my patron, but being diffident of his own capacity he is not sure of comprehending every thing exactly, and wishes earnestly to be set right from your own mouth. Has your boy any brains, quoth the bag, yea, is he attentive, not to say, docible, nor yet, tractable? As for brains, replied my patron, it does not become the partiality of a parent to pronounce upon them: but I have always found him very desirous of learning while under my tuition. Well, well, quoth the voice, let him propose his difficulties. But, added my conductor, my son has been so constantly used to sensible objects that he cannot hear what any body says unless he has a face to look at. Do so much as put out a head to humour him and make his improvement easier.—Pish! Phoo! grumbles the bag.

Futredo

Putredo and Sphacelus take it! What a deal of pother is here to please a young fellow's whims, yea, vagaries, not to say fooleries, nor yet impertinencies! We then beheld a head with a stern hard-featured countenance rise slowly up, like a ghost through the trap door of a stage. Come, says my guide, be quick. Do not waste the Doctor's precious moments.

60. Venerable Sir, says I, son and heir of Esculapius, that I may not stick in the first threshold, I would be glad to know whether I rightly comprehend the force of these introductory terms which open the door to all the rest: I mean a mixture, a compound, a machine, an engine, or instrument, or organ. Prithee, says the professor, none of your fashionable, yea, vulgar, not to say, gossiping nor yet, finical language. You must learn to use the scientific terms if you would be good for any thing, and say mixtion, composition, mechanism, organism, as well in entire systems as in their sundry parts, yea, members, and moreover, the speciallest species of them.—I thank you, learned Master, says I, for your correction, which shall not be thrown away upon me. Now I apprehend those four things are under-species of one another: so that a particular kind of mixtion is a composition, a particular kind of composition is a mechanism, and some mechanisms

are

are organisms. If I throw two pecks of pease into a bushel measure, that is a mixtion; if I pour in two pecks of oats upon them and shake both well together, that is a composition: when a watchmaker has compleated a watch so that it can point the hour and minute and make several automatic movements spontaneously, this is a mechanism; when an artist has finished a fiddle to give all the notes in the gamut but not without a hand to play upon it, this is an organism. The same appellation belongs to a rolling stone, a wheelbarrow, a cork screw, a pencil, a knife, which are fitted for peculiar uses of mankind but will do nothing of themselves without somebody to handle them. Thus our poet said, or should have said, of a pair of scissars, he takes the gift with reverence and extends the little organism on fingers' ends. —Good boy! good boy! says the venerable, your child may come to something in time.— But, continued I, my fear is that I have not yet gotten the true characteristic, yea criterion, not to say, diagnostic, nor yet, line of separation dijunging the province of organism from the rest of the mechanism territory, so as to know precisely upon every particular occasion which is which. For though I can easily see that a man's hands and feet and tongue are organisms, because they will not handle

handle nor walk nor speak unless he sets them at work; yet to my apprehension the heart and arteries, bowels and other vessels, seem to fall under the idea of mere mechanisms. Whereas you have taught us that the whole human body, together with all its viscera, yea, chylepoietic digestories, not to say, sanguiferous trunks, nor yet, minutissim glands, and moreover, speciallest species of secretory ducts, and even cellules of the adipose membrane, are so many distinct organisms.—I see, says the professor, your son is a little dull of apprehension: but that, you know, he cannot help. Therefore though we are confident that every thing set forth in our Theory radiates, as the saying is, with its own lustre, yet we shall cast a further blaze upon it by one or two familiar examples in condescension to shallow capacities. Mind me, then, child. Suppose you bespeak a clock of artificial and workman-like construction, with everyway-multiform-exquisitely-mechanical circumstances belonging to it. The artificer brings it home, puts it up properly upon the dimidiate platform of your staircase, and sets it exactly by the equation table: now it is an organism. But if you let it go down, and after winding it up again should, either through oscitancy or want of sufficient skill, set it at hap-hazard, so as to make

make it strike four when it ought to strike one; or lengthen the pendulum, so that it loses ten minutes an hour: then it is nothing but a mechanism. Again, suppose in some remote, yea, hitherto perhaps by human industry unreached regions of the terraqueous globe, there should be large tracts of country or islands, which by the spontaneous condidition of their soils, their waters, their hills, and their vallies, should be beautifully adorned with woods, and fields, and animals of various kinds; nobody, I think, would contradict that all this proceeds from mere mechanism: and it must appear, I think, with the same evidence that there is nothing in act organical among all these circumstances. Send a colony to one of those lands, who shall build houses, dig cellars, raise provisions for themselves and their domestic animals, plant trees and corn which the ground may nourish and bring up quite to maturity: then it immediately becomes an organism.—I am a little suspicious, says Locke, that my boy does not fully comprehend you yet.—No? cries the venerable in surprize, He must be a blockhead, yea a numskull, not to say, a beetle, nor yet, a blunderbuss, if he does not.—Oh, yes! says I. The celeberrimous Doctor has made the thing as clear as the sun. I can easily understand how any tract

of

of land or water may become an organism. I remember when I was a stripling, the vast Pacific Ocean, commonly, yea, vulgarly, not to say, news-paperrically, nor yet, tea-tabellically, and moreover, among the speciallest species of ale-drinking, burthen-carrying, fish-selling rhetoricians, called, appellated, as the saying is, and annominated, the South-sea, was made an engine, I mean organism, to pick people's pokets and ruin half the nation. The like had been done but the year before in a neighbouring nation with the great river, the river Missisipi. And it is not impossible that a few years hence the three rich Nabobships of Bengal, Bahar, and Orixa, may be turned to the same laudable purposes.

61. It quickly appeared I had committed murder, his features, which before were hard as oak, became now as hard as rock, and he began to draw in his head with as much speed as his great gravity would permit. But Locke, being a good deal nimbler, clasped him under the chin with two stout ploughman's hands, crying at the same time. Pray, Mynheer, dear Doctor, celeberrimous Doctor, insignite illustrissim Doctor, Hallensian star culminating in the zenith of brightness. Never mind what a child says. I am sure he meant no harm. It was only his vanity made him pretend

pretend to understand you when he really did not. I durst not utter a syllable all this while for fear of making matters worse, but kept drawing myself up with the hand I was holden by till my vehicle touched Locke's, expecting he would feel my thoughts. He then let him go, when instantly the head shot in, like a large knife into a new sheath, when by pressing with might and main you have just overcome the stiffness at the entrance. We now had only a shapeless bag before us: but we saw the vocal fibres agitate all over, and heard a vehement eager grunting, such as the hogs make when a strange pig comes into the yard.

So we left Mynheer Celeberrimous to compose himself and make peace with his own shadow as well as he could: and being gotten to some distance, Locke owned I was in the right not to wish the conference might be renewed, for I should never have profited by it. So I believed, quoth I, for he is a bar's length more profound than Pythagoras. —Pythagoras, returned he, had his reasons for being profound; but this man is profound because he cannot help it. But how came you to be so careless as to disgust him after all the hints I had given you?—Why, says I, did not I follow your injunctions to a hair? —Truly, says he, scarce to the thickness of a cable.

cable. Instead of appearing to comprehend him, you showed yourself resolved to misapprehend him, nor did you observe the charge I gave you to distinguish between imitation and mimickry. There is one caution very needful for you airy gentlemen to bear in mind. Never hazard giving offence for sake of a joke.—Well, says I, this is the second time I have suffered by my indiscretion: though I have some excuse here, for he so be-blockheaded and be-blunderbust me about as was enough to hurry any body, and throw them off their guard.

But since the mischief is past remedy I must rest contentedly under it: unless you will be so kind as to repair the damage by giving me a system of his sentiments. I am sure you can do it accurately, for you told me he could talk currently to you, though not with you, in the sentient language.—But then, says Locke, you must tell me what part of his system you would have: for the medical would be of no use to you, and the physical, most of it, stands nearly connected with the other. That part, says I, relating to the formation of the fœtus. My patron asked what good it would do me to know that. I told him, perhaps it might furnish me with an argument from analogy in confirmation of a point I have been labouring to maintain, namely, that our conduct

conduct upon earth may naturally have an effect upon our condition afterwards. For if it could be made appear by the labours of an eminent physician and careful examiner into the secrets of human nature, that our terrestrial happiness is affected by our behaviour in the uterine state, a probable inference might be drawn from thence, that all the several forms of Being we pass through, are by the laws of nature made dependent upon one another, and each of them preparatory to the next. Now my curiosity to consult Mynheer Celeberrimous was first raised by Hartley, from whose hints concerning him I was simple enough to expect he would show me by undeniable arguments, drawn from his medical science, that our health or distemperature of constitution, our vigour or weakness of body, our quickness or dulness of parts, and even our natural aversion or propensity to particular vices, were owing to the prudent or careless management of ourselves before birth. But alas! how was I disappointed! when instead of clear demonstrations from experience and discoveries of anatomy, I was presented with a confused Chaos wherein I could discern nothing distinctly, and even suspected the Celeberrimous did not always understand himself. I was in hopes too of finding something concerning the animalcules: for though their ex-

istence seems generally believed among my learned cotemporaries, it is not admitted by every body. Might I be so bold as to ask what is the real truth upon that article? My patron rebuked me for this last presumption.

Prithee, says he, don't think to palm your notion upon the world below for vehicular truths. I shall not give my sanction to such an attempt, I assure ye. Whatever might tend to the improvement of your religious and moral sentiments I have already told you. All informations that have been sent from above were given with that sole view, and whoever seeks for any thing further in them grossly mistakes their meaning. As for matters merely speculative you must be content with such glimmerings as human sagacity can strike out. Your new acquaintance has made some alterations in his system by his converse among us, which render it a little less perplexed and incoherent: and I believe you had rather I should give it you in this condition than precisely that it stood with him in upon earth. Nevertheless, having store of concretions remaining, as you might perceive just now, he has not quite gotten rid of human prejudices and human errors: so you must still look upon what I shall tell you from him as the opinions of a mortal, not as the knowledge of a vehicle.

62. He

62. He had no thought of the animalcules below, but since Leuwenhoek and Boerhave came up, has been made a thorough convert to that doctrine. He says the animalcule gets into the Ovum at the broken end of the Calyx, where it finds a tube growing narrower by degrees, into which it pushes with vehemence, until being streightened on all sides by the closeness of the passage, it can move neither forwards nor backwards, nor even bend its little body; nevertheless, being all nerve and fibre, it exerts itself strenuously in every point of its surface. Those points in the internal surface of the Ovum, which are soft and susceptible of its action, adhere to it and receive its impulse, which continually protruding them forwards, causes them to grow first into an embryo, then into a fœtus, and lastly the full-formed child. But as there are multitudes of fibres capable of extension in different degrees, and they often stick to one another, if the ends of those which have done growing should fasten to the sides of the others, it must necessarily stop their direct progress, and cause them to double into folds. Thus the heart, which at first was a straight canal, becomes doubled into ventricles and auricles. Thus the six bowels affording a passage to the victuals from our stomachs, are one continued tube esteemed six times the

length of the man, but folded among one another so as to lie commodiously within the Abdomen. Thus likewise the smaller fibres become convoluted into Plexuses, Ganglions, Glands, and winding ducts.

If this extension was not owing to the action of the animalcule, why should it never take place in the Ovum before being impregnated therewith? for that receives continual nourishment from the Ovary wherein it was produced. Nor does the child wholly leave off this exercise upon birth, as appears by the grunting noise it frequently makes, especially after being fed, which the nurses call thriving, because they find by experience that it contributes to the growth and nourishment of the babe. And even when arrived to years of maturity, we cannot forbear sometimes yawning and stretching, supposed owing to some perspirable matter wanting to be discharged, which this effort helps to push forward and throw off. Thus the fœtus does not want for employment, being perpetually occupied from its first union with the Ovum in distending its fibres; which it is led to do by an instinct, that is, by sensations sometimes perhaps painful occasioning maims, distortions, and imperfections, but for the most part pleasurable, assisting in the growth of the viscera, limbs, and members: for good plight

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of body bespeaks an easy mind, and anxiety is observed to vitiate the juices, and corrode the flesh. Boerhave has remarked that pleasure and pain proceed from the same mechanical causes operating only in a different degree: a nerve moderately stretched yields a pleasing titillation; when almost ready to break it gives anguish; and when quite broken ease ensues. In the former case the mind strives to thrust forward the hither part of the nerve to meet the titillation, and feel it more sensibly; in the latter to draw it back either for closing the passage or attaining ease by a complete rupture. Thus whenever exerting her activity to extend, she is in a state of pleasure: when to contract or withdraw, in the contrary. And this may account for those sudden amputations of an arm or a foot, sometimes happening on frights of the mother: for a violent contraction may snap short the tender fibres just in the place where the uneasiness was felt.

Therefore what Boerhave asserts of the fœtus passing far the greater part of its time in sleep without any ideas, must be understood of such ideas from external objects as engage the notice of men: for ideas may spring from inward feelings, while the limbs and outer parts lie motionless, as in sleep. But as the sensible nerves grow in length

and

and become gradually connected with remoter parts of the distended Ovum, sensation follows their progress, and seems always taken at the very extremity of the nerve conveying it: hence we apprehend ourselves perceiving at our eyes, or our ears, or our fingers' ends, and esteem ourselves present throughout the whole surface of our body; or rather beyond, our imagination renewing that antiquated notion of something going out from the eye quite to the object, so that we account done in our presence whatever is done in our sight. It must not be supposed the fœtus proceeds with skill or forecast, or knows the uses of the limbs and vessels it forms; but is directed to exert its activity from time to time at the proper places, by sensations of present pleasure and pain, excited mechanically by the circulating juices and gross composition surrounding it.

He says further that the animalcules are variously sized and constituted, according to the origin whereout they sprung, and so are the Ova; whence it comes that the child takes after both father and mother jointly: but as the same tree bears differently conditioned fruit, so both animalcules and Ova of the same growth are not all exactly alike; and hence it happens that children of the same parents differ widely in their disposition,

make,

make, and features, yet there is another cause which increases the difference, namely, the occurrences befalling the mother during gestation: for the state of her imagination affects the burthen she bears, not immediately by mechanical operation, but by influencing the imagination of the fœtus. This he attempts to prove by many instances, as well from his own experience as the testimony of Boerhave, of very extraordinary effects produced by the frights and longings of women. He owns, however, that some persons of great knowledge do not admit the reality of those instances, but thinks their bare denial of the cause without accounting any other way for the facts, which are incontestable, not sufficient to shake the authority of the greater numbers who maintain it.

63. Here I begged leave to put in a word of what I had heard among my cotemporaries relating to this affair of the mother's imagination: for that I knew a man eminent in his profession, perhaps the best anatomist in Europe, who treated this as an idle notion, insisting that the supposed marks are mere sports of nature, like the spots and warts often found upon apples: but when any thing of this sort happened, the mother hunted about for some fright or longing she could recollect, and by an after-thought assigned that for the cause.

cause. On the other hand, I was told by a man-midwife of very great repute in our Metropolis, that once upon a delivery, wherein nothing appeared amiss to his observation either in the mother or the child, she pressed him earnestly to examine the hands: accordingly when the child was carried into the next room, he took the first opportunity to examine the hands, and found on each of them a supernumerary finger, which adhering only by a bit of skin, he snipped them off with a pair of scissars, and presently healed up the wound with a little salve. It was thought proper in the family that this should be concealed from the mother; so upon her asking him he was forced to tell her he had found the hands such in all respects as might be expected in a healthy vigorous child. She then cried out in a transport of joy that she was extremely glad of it, for that on such a particular day, being in a chariot, a beggar woman had thrust in a pair of hands with six fingers, which had alarmed her greatly, and ever since it had run strongly in her head that the child would be born with the like. Now this could not be an after-thought in the mother to account for a phenomenon she never knew of. If I were ever to see the Celeberrimous again, I would recommend to get some of his neighbours, who go down to earth

earth, to bring him a report of the cases cited from very good authorities by Dr. Douglass, in his Criterion of miracles, wherein are several accounts of astonishing effects produced upon the bodies of persons in years by a strong impulse of imagination. For if that faculty has so great a power over the dry and stiffened fibres of an adult, it may well be presumed to act with much greater force upon the tender filmy flesh of a fœtus. I will give him your hints, says my patron, which I doubt not he will thank you for: and perhaps they may atone with him for your late rudeness. And possibly he may learn something from Gellius by the sketches observed in the tablet of your memory. I am afraid, says I, they will be very imperfect, for it being some years since I read the book, the traces are in great measure worn out. But probably Gellius may be good natured enough when he hears what we have been talking about, to inspect the sensory of some other person who has the impressions fresher.

But, continued my instructor, with respect to the objections of anatomists, our professor says the point does not lie within the compass of their art to decide: for between the Placenta and Uterus, there lies a Mucus or thick humour, which Boerhave will agree with him is not properly a humour, but a congeries

ries of exceeding fine vessels, too fine for any instrument of the anatomist to trace out; nevertheless they may suffice to carry on the communication of ideas between the mother and the infant. Yet you must not imagine the very same ideas propagated from one to the other; for when the mother is terrified with threatening words, the embryo cannot be supposed to have the sound of them in its unformed years, much less to understand their dangerous meaning: nor when she longs for a peach, can it be thought to perceive the fine flavour or beautiful bloom that strike her fancy. But the modifications and motions of matter may excite ideas correspondent to those which occasioned them, yet without their being similar: and of this you may find examples in common life.

When a man writes a treatise, the ideas in his head direct him to the matter and manner of his composition: if he sends it to the press, the compositor cannot place his types without ideas, which he takes step by step from the copy before him: yet are his ideas very different from those of the author, who may be presumed continually attentive to the strength of his reasonings, the aptness of his figures, and propriety of his language, without much regarding the grammar and spelling, which flow spontaneously from his experienced

ed pen; whereas the compositor's mind is wholly occupied with the letters and orthography, he thinks nothing of the argument, nor manner of handling it. Then again the reader pays little regard to letters and syllables, it is enough if there be no gross misprint or egregious blunder to draw off his notice, he takes in whole sentences and paragraphs at a glance, and directs his attention to observe the main tenor and disposition of the performance. Nevertheless, the ideas he receives perhaps may vary greatly from those in which the author wrote: what struck the one as something sublime, humorous, or elegant, may seem low, insipid, and vulgar to the other; what one thought demonstration, to the other may appear a rope of sand; what was dictated to the one by a spirit of rational piety, may raise in the other an idea of profaneness or superstition. Thus the ideas of all three, though far from being similar, correspond and depend upon each other: for had the author had other thoughts, he would have written in another manner, the compositor would have ranged his types otherwise, and another train of ideas would have been suggested to the reader.

He is grown so zealous an advocate for the animalcules, as to insist that they are rational creatures, because their being never found, unless

unless in the cellules producing them, in the Epididymis, the Vas deferens and the Vesicles, although the humour they float in is known to diffuse over the whole human body, indicates a choice and discretion that withholds them from entering places unfit for their accommodation. Besides, it stands to reason that the ethereal body should have a fuller use of all its powers, the thinner and finer the elementary covering is wherein it lies enveloped: as a man has the fuller use of his arms and fingers in kid gloves and a silk waistcoat than if he put on a great horseman's coat, and a pair of heavy gauntlets. And the rationality of man proceeds from there being some hollow cellules in the Ovum, which do not adhere to the animalcule: whereas in the brutes and insects the gross elementary body presses everywhere close upon the little inhabitant within, so that it cannot act in any point except in those alone where the gross covering is yielding and movable by it. Therefore though they distinguish and judge, they have such judgments only as their senses from time to time impress upon them: but man possesses a power of acting upon his own thoughts, and calling up ideas of reflection without aid of external objects. Yet is this power less than in his original state, for those ethereal strings which are drawn

drawn out to an immoderate length by the distention of the Ovum in its growth, must hinder the operation of the others: just as a man who should have the fingers of one hand thrust into a low waxen ceiling, which kept them always stretched at arms length, would not have so full a use of the other arm as if both were at liberty.

64. He has battled strenuously with some who denied there could be much scope for action and enjoyment within so narrow a prison as the animalcules were cooped up in: for, says he, all magnitude is relative to the size of the creatures observing it. Upon earth we used to take for the basis of our admeasurements the breadth of a large man's thumb, which we called an inch: twelve thumbs were supposed the length of his foot: something more than five of those feet made his pace in walking fast: a thousand of his paces made a mile: and by miles or thousand paces we computed the largest tracts of country, the circuit of the globe, the distance of the Sun and planets. Thus our highest computations still bore a reference to the parts of our human body. Now imagine animalcules to take their rise in measuring from the width of their tail, which we may suppose the same to them as a foot was to us: let five of those feet, or better, go to a pace, that is, such length

length as they can throw themselves forward by one wriggle of their tail: then reckon by animalcular miles or thousands of such paces, and you will find more of them in the many winding ducts open to their passage than you would have miles to pay for a post-chaise to carry you about all the roads in England. But you would hardly think a man kept in close imprisonment, who should have the whole kingdom of England to range in.

He will needs have it that the entrance of a particular one among their number into the Calyx, is not matter of chance, but settled by certain rules founded upon solid reasons: nor is it claimed as a privilege, but submitted to as a burden unreluctantly upon a motive of public spirit; because if the race of men were to fail, the race of animalcules must cease too for want of a proper habitation to subsist in. It has been objected against him, that the violent frisking motion with which they are always found to dart to and fro, does not give the appearance of a prudent considerate animal. To this he answers that this is not their natural motion, which is more sedate and regular while in their proper places of abode: but they are never seen with the microscope unless in a dying state upon being driven out of their element. Yet are their agitations neither effects of wantonness nor expressions of pain

pain or uneasiness, for death is terrible to man alone: of all other creatures the inferior know not what it is, and the more intelligent know it is nothing more than a passage from one state of existence into another. Therefore though the wanton waste and destruction of them be a species of murder, they lie under no such terrors as mortal man upon falling into the murderer's hands: they perceive their material integument beginning to break, and exert all their efforts to rend it asunder the sooner. Have you not observed the little insect producing a gnat dart up and down with sudden jerks and great velocity in the water, till one end being gotten open is thrust up to the surface? when immediately issues forth the winged captive from its imprisonment, in joy, no doubt and transport, soaring aloft to take possession of its new aerial country. So Psyche enclosed in the animalcule, upon finding the walls of her prison crack, struggles hard to hasten the total rupture, that she may get a compleat deliverance from her immersion in matter, regain her native heavens, and mingle among the host of her congenial spirits.

65. I have now, added my patron, given you as much of his notions as you can want. You are not to take them all for Gospel; but parables are employed in the Gospel, and even popular

popular opinions not discountenanced when they can be turned to useful purposes. Much more the imaginations of learned and close-thinking men may serve, when rightly applied to enlarge your mind by enuring your imagination to follow more readily the judgments of reason. They may give you a quicker apprehension of an important truth built upon solid grounds, namely, that happiness is not confined to the enjoyments and accommodations of human life. For the arm of the Almighty is not so short, nor the treasures of his wisdom so scanty, as that he should have but one way to make the existence of his creatures pleasurable. He can give them what measure of gratification he judges proper in the body of a giant, an insect or an animalcule, by intelligence and reason or gross sense and appetite, on earth or under ground, in water, air, or ether, or naked and unembodied in any material composition whatsoever. As he changes their nature, he changes their situation too and the circumstances of it, adapting each to the other: for various natures require various situations, and what would be wretchedness to one is enjoyment to another. You could not subsist in the waters where the great Leviathan takes his pastime: and the pure air that gives you spirits would prove his certain destruction.

You

You would be miserable without society, light, and exercise: but the fœtus lives satisfied and thrives, pent up in a dark and lonesome dungeon. Therefore consult your present nature so far as to provide by what methods you can for its preservation and well-being: but when called to another, where the meats and drinks, the lands and houses, the diversions and pursuits of men, could be of no use to you, yet follow without reluctance: for the same Power, who has furnished you so amply by a thousand wise and wonderful provisions in one state, will supply you as commodiously with the requisites needful for your accommodation and enjoyment in another. Trust then stedfastly in him, and fear nothing: for wherever you go, you cannot go from under the eye of a beneficent governor and indulgent parent.

My good patron had his particular reasons for summing up with this very grave conclusion: but though he did not disclose them, they became apparent presently. For no sooner had he done than we saw ourselves surrounded with a group of vehicles, who came up with great joy and alacrity to congratulate me, for that they perceived I was just going to be advanced. I could not help being startled, notwithstanding his last seasonable admonition, having brought up some of those ap-

prehensions natural to mortals upon an approaching change. I surveyed my outside, but could see no alteration there: neither did I feel any thing unusual within, except some considerable tremours which I knew were owing to my fears. However, in a few minutes my vehicle bust, and I became instantly absorbed into the Mundane soul.

66. As upon a man awaking in the morning out of sleep, the dreams and visions of the night vanish away, his senses which had been kept stupified throw open their windows, his activity that had lain suspended returns, he resumes the command of his limbs, recovers his ideas and understanding, and goes on with the schemes and occupations he had begun the day before: so upon my absorption I found myself, not translated into another species of creatures, but restored to myself again. I had the perfect command of my limbs, and their motions were familiar to me: I had that knowledge and judgment which is the result of experience. My body was immense yet I could manage it without trouble, my understanding extensive yet without confusion or perplexity: for the material Universe was my body, the several systems my limbs, the subtile fluids my circulating juices, and the face of nature my sensory. In that sensory I discerned all science and wisdom

wisdom to direct me in the application of my powers which were vigorous and mighty, extending to every member and fibre of my vast composition. I had no external object to look upon, nor external subject to act upon: yet found an inexhaustible variety to employ my large thoughts and unwearied activity within myself. I rolled the bulky planets in their courses, and held them down to their orbits by my strong attraction: I pressed heavy bodies to the earth, squeezed together the particles of metals in firm cohesion, and darted the beams of light through the expanse of innumerable heavens. I beheld the affairs of men, discerned all their springs of action, and knew how to set both them and the courses of events so as to guide the wheels of fortune with unerring certainty.

Nor did I find the least inclination to use my power wantonly or disorderly in any single instance; for wisdom is ever steady to itself and pursues invariably one grand and well-concerted design. Good was my constant motive and an exact knowledge of every thing tending to promote it my perpetual direction. I knew my own immortality, nor did I look upon the short excursions into matter as a discontinuance of it. I was beyond expression happy, the regular motions in my great body giving me a more cheerful flow of spirits

and more pleasing sensations than the most vigorous youthful health; my imagination entertained with a multitude of varying, never satiating objects; my understanding capacious and clear; my judgment sound and piercing; my conduct blameless, wise, and satisfactory. Nor could any thing fall out to disturb me, for all the parts of my composition lay under my control and inspection: my circulations were not mechanical but voluntary, and if at any time I had a mind to change my position within my vast body, I could fasten to some particle of the circulating juices I had moved, which would transport me whithersoever I wanted, yet without losing sight of the place I came from.

67. Yet with all these mighty powers and privileges I had no temptation to pride or vanity, for I knew that in my own individual I was weak and ignorant, unable to stir a mote in the Sun beams or produce a single perception from my own fund: but all my knowledge was brought me by communication, and my operations performed by the joint concurrence of innumerable hosts of substances of the same nature with myself surrounding me. For there being a general participation of ideas throughout the whole community, we had all the same apprehension, the same discernment of things, the same aims and purposes:

purposes: so there was no variation of sentiment nor discordance of desire among us. The thoughts of all were the thoughts of every one, and the actions of the whole the acts of each particular: for each was consenting to whatever was done by the others, and no sooner wished to have a thing done than he saw it instantly performed. As we had but one mind and one Will, every thing happened according to that Will; for pervading and being mingled with the corpuscles of matter throughout the universe, we actuated the vast mass, each contributing his share, which though singly small, yet when united with the rest, sufficed for every work how stupendous soever that was requisite. We were sensible that our strength lay in our unanimity, and in promoting the general good we promoted our own, which made us apply our endeavours with alacrity and delight. We took pleasure in communicating our pleasures, and transmitting our lights as fast as we received them: by which means we had each of us a full display of nature, and by reflection therein, of the Author of nature.

For though we could move and range the particles of matter as we pleased, we were sensible that we did not create them, but they owed their existence, their solidity, their mobility and other primary qualities, to a higher Power.

Power. We perceived likewise that sensation was the ground-work of our knowledge, that sensation proceeded originally from matter, that if matter should be withdrawn or lose its quality of affecting us with perceptions, or our mutual communication cut off by removing us out of contiguity with one another, we should utterly lose our percipience and power of action. This convinced us that we ourselves, although a nation of kings governing the universe with absolute sway, were subordinate and dependent. We considered that though our present views and judgments arose from the position wherein we had placed the several bodies of the universe large and minute, yet were we moved so to place them by contemplation of some former position: thus position followed position, but the whole must have had some beginning, which we could not give it, because there must have been some prior order to serve for our motive and direction before we could begin to act. We saw further that our own existence could not be necessary, we being many; because what was necessary in one place must be so everywhere, and consequently One, not in similitude and communion only, as we were, but numerically and individually One. Therefore though we were conscious of our community having subsisted

subsisted from all eternity, nevertheless it must have been produced from eternity by a prior Cause, prior in order and efficacy if not in time.

68. Thus the consideration of our own nature, together with the nature and disposition of bodies throughout the universe, led us to the knowledge of God, whose work we were both in body and soul. We found ourselves subjected to laws we did not make, to migrations into matter wherein parts of our substance lay enveloped as in a shell, cut off from all communication with the rest. As we had both a retrospect and prospect of eternity, we regarded the longest of those migrations but as a moment, no more than the smart a man feels on plucking out a hair from his face, therefore submitted to them readily in our several turns, nevertheless we submitted out of necessity, not out of choice. We observed the condition of our substances when immersed in matter, their actions and events befalling them, and discerned uses therein to ourselves unthought of by them. We perceived a small mixture of evil among their good; we would gladly have prevented it but could not without greater mischief to ourselves, for it was made necessary to our well-being. We sometimes, upon rare and extraordinary occasions, discovered motions

we did not produce, events we did not bring to pass; which convinced us of an interposition to restrain the growth of evil, and to rescue those immersed substances to whom the courses of nature had rendered it perpetual. These observations displayed to us the divine Attributes, we saw them consistent and aiding each other, with a clearer and fuller view than mortal eye can reach or mortal heart conceive: we beheld Glories ineffable which it is not lawful, or rather not possible to utter; nevertheless there were greater Glories behind, which no created intelligence can penetrate.

69. The contemplation of these Attributes, which we saw were parts only of the Divine Essence, inspired us with a transcendent admiration, an ardent love and filial reverence, towards our Almighty Father, who was our continual dependence and support, the fountain of our immense powers and unspeakable happiness; and prompted us to employ our eternity in returns of incessant adoration. But our adoration did not exert itself in hymns or empty praises or verbal thanksgivings: we discerned his Will written in legible characters upon the face of his creation, and applied ourselves industriously to fulfil it. The courses of nature carried on by our agency were our hymns, the government

ment of matter administered by our hands was our praises, and a ready obedience to his commands was our morning and evening sacrifice. We knew that in all our functions we were only his ministers delegated and empowered for that purpose: but it was our joy and our glory to be employed as his ministers in executing his works. For they were not arbitrary commands nor exertions of despotic authority: he wanted not our services for his own use, but gave us our tasks in mercy and loving kindness to be a blessing to his creatures; so that in working for him we worked for ourselves, and for one another. We caused our inferior ministers, the heavenly bodies and elements, to pay the same active adoration. By our energy we stationed the golden Suns, and strengthened them to hold their several Vortices in concord. The silver Planets compleated the harmony by their various aspects, their change of seasons, and vicissitudes of light and darkness. One day told another, and one night certified another: their sound went forth to the several earths, their voice was heard among the innumerable hosts of heaven. Gravitation and cohesion whispered their share of praise to the attentive ear, the subtile fluids of air and ether joined in the chorus: and the whole creation was one incessant Hallelujah.

Nor

Nor did we forget those of our fellows imprisoned within the walls of matter, but provided for them all the accommodations and enjoyments permitted by our common Master. The dispensations of his Providence were conveyed to them through our means, by the laws or nature which we executed, and disposal of second causes which we put in act to bring forth the destined events. With our plastic virtue we worked upon the multitude of habitable globes rolling round their appointed centres through the fields of ether: we cloathed their surfaces with the green herb, the flowry shrub and tree yielding fruit; caused them to produce fossils and minerals below, dews and vapours and benign influences above. We wove the little fibres of vegetables in curious textures, sorted them into a thousand various species, and fitted them for a thousand different uses. We interlaced the more curious vessels of animals in many intricate mazes among one another, hollowing them into tubes respectively filled with their peculiar juices, that partly they might perform regular mechanical motions of their own, and partly serve as convenient instruments for the spiritual agent within them. We guided the sensitive tribes by instinct, directing them unerringly to the necessary means of their preservation and encrease, and to answer the purposes

purposes they were designed for with regard to other creatures. The upper species we governed by wants, and appetites, and passions, together with some glimmerings of reason flashing at uncertain intervals. He had his free choice to conduct him in every action, but we knew how, by the springs of inclination and opinion, to draw his choice upon what particular point we pleased. He acted mostly upon short aims and private views, yet we contrived that in so doing he should work himself out a remote benefit he thought nothing of, and co-operate to the general good. Even his vices and foibles were not useless under our management: ambition, avarice, luxury, vanity, shame, fear, lust, laziness, petulance, fraud, resentment, envy, had their tasks assigned them: evil became productive of good, and the wicked was made for the day of the Lord: folly and wantonness had their several lines allotted them to fill up in the glorious all-perfect plan given us by infinite Wisdom. The proper station was marked out to every creature, from whence it could not be spared without detriment to the whole: they all answered their destined ends, without knowing what those ends were, or having any desire of attaining them. For as the strings of an instrument perform their parts in the tune, yet

yet without any knowledge or perception of the notes they give: so the sublunary agents bore their several parts in the general harmony, and contributed to carry on that order of succession among events of which they had no thought or conception.

Thus by directions issued from above, and our faithful ministry thereof, it was brought to pass that all things, animate and inanimate, co-operated in displaying the wisdom and goodness of that Power which first ordained their motions. The serpentine rivers and unfathomed oceans, fire and hail, snow and vapours, wind and storm fulfilling the tasks imposed on them, mountains and all hills, fruitful trees and all cedars, beasts and all cattle, worms and feathered fowls, kings of the earth and all people, princes and all judges of the world, young men and maidens, old men and children, all united in the universal song to the glory and praises of their beneficent Creator.

And upon some extraordinary command received, enow of us were found ready at hand to throw the particles of matter into various forms and appearances for producing any supernatural effect. But whether we act ordinarily or extraordinarily, we do both invariably according to the general plan assigned or occasional decree issued: wherefore let not

not mortals address their prayers to us, for we have no discretionary power, nor shall any entreaties prevail upon us to depart a tittle from our orders. Neither were entreaties needful to make us fly to their relief whenever found allowable, for we bore them no grudging or envy, we had no vanity nor fondness for superiority and power, nor contempt of them in their degraded state: but sympathized with their distressess and weaknesses, as with congenial spirits, children of the same Father, fallen from their original perfection; and laboured incessantly by all means permitted us, to raise them from their debasement to rank upon a level with ourselves in equal participation of all the powers, privileges, and unbounded enjoyments, wherewith we were blessed. We watched over nations and empires without neglecting the affairs of private persons: for being diffused throughout all corners of the universe, some of us were ready everywhere to attend the minutest offices, and having one understanding and design in coming among us, we knew how to adjust the actions of single men to the interests of communities. We paid due regard to matters of importance, nor did we overlook the merest trifles; for nothing was trifle to us because our capacities were so large that nothing took off our attention from other duties.

duties. Therefore we did not suffer a sparrow to fall to the ground, nor the hairs of a man's head to diminish in number, without the Will of Heaven.

70. With this unceasing attention to the minutest objects, it may be concluded we did not overlook Gellius as he sat close to his task in my human sensory: he could not receive intelligence of what passed with me now from the vehicular people, so it was necessary we should convey it to him ourselves. We wrought upon his imagination by our secret energy, casting his mental organs into modifications exhibiting the ideas to be set down, which we excited successively in their order, not giving him a view of whole sentences together: so that he worked like a man in a trance, or one walking in his sleep, or like the Pythian priestess under inspiration of the oracle: he wrote by impulse things he did not understand, and wondered at the words he wrote. It was now judged expedient that I should return to my vehicle, but before my return we thought proper to send an illusion upon Gellius of events that had not happened: he wrote according to what we dictated, and the tenor of the illusion he wrote down ran as follows.

71. We gathered together certain particles of matter, and disposed them into two forms, the

the one human and the other angelical; a sufficient number of us undertook the management of the latter, and I was enclosed within the former: so I became a man with human limbs and senses, with the understanding and thoughts of a grown man who had spent his life in study and contemplation. And there stood before me an Angel, his countenance was mild and lively, his raiment white and shining, he had spangled wings growing from his shoulders, his sides, and his legs. And he said, O Man, come along with me: I will teach thee what to think of Glories thou canst not comprehend, and make thee more sensible of the infinite distance between the creature and the Creator. So saying he took me up and carried me to the utmost bounds of the universe. And he said, Try now if thou canst create a new world beyond this. And I said, far be it from me to attempt encroaching upon the Divine prerogative: thou knowest I am poor and weak, unable to act without corporeal instruments, and the little power I have is given me. And he said, I know thy weakness, that the power is not thine, nor do I expect that thou shouldst operate: but I am commissioned for thine instruction. Know then, that creative power awaits thy direction for a trial of what thou canst perform by it.

Alas!

Alas! said I, I know not where to begin nor how to proceed.

And he said, Stretch forth thy right arm: thrust it strait from thy side. And I assayed but could not thrust it out: not that I found any thing resist me, but when my arm came to the utmost verge of the universe, it seemed as if I had lost the use of it, so that I could not move it further. And I asked the Angel, Wherefore cannot I move mine arm this way? I can thrust it above or below, before or behind me, but I cannot stretch it out from my side. And he said, Because there is no space to receive it. And I said, Since it hath so pleased the creative Power, and this is for mine instruction, May there be space. And he said, Put forth thine arm again. And I put it forth with ease strait from my side, as I could have done any other way.

And he said, Wave now thy fingers to and fro, moving them in order one after another. Accordingly, I endeavoured to do as I was bidden, but could not perceive whether my fingers moved or not, for I had the same feel all along as at the first instant when I stretched out mine arm: wherefore I asked, Why cannot I perceive whether my fingers move or no? And he answered, Because there is no time, neither without time can there be a succession of ideas or motions. Then I said,

May

May Time begin her course. And presently I felt my fingers move to and fro in the manner I had intended to move them.

Then said the Angel, Now will space continue and Time run on her course for ever, until the same Power which gave them birth shall interpose to destroy them. What purposest thou next? And I said, Is it meet that Time and Space should be useless? Should there not be creatures endowed with perception and activity to solace themselves in the habitation provided for them, and also bodies to serve for instruments of their action and objects of their perception? Proceed then, said the Angel, to furnish and people this new world. But I said, O, Messenger of Heaven, thou knowest there requireth wisdom as well as power to do this great thing: I understand not what number of creatures this space might contain, nor the proportion of matter requisite for their uses, neither how to assort it into elements and marshal the particles thereof in their proper order.

On a sudden I found myself illumined with more than mortal intelligence; though there was yet no light, I could distinguish every corner of the new created space, comprehending the whole at one view. I knew precisely what quantity of matter was requisite, what places to assign the particles, and

how to give each the proper motion and direction to exhibit a plan to the precipient creatures directing them to carry on the order of succession once begun. But the vastness of mine intelligence perplexed me: for mine aim was none other than to communicate happiness to the perceptive creatures who should be created, but was utterly at a loss in what manner to execute my intention. I saw the creatures could not be made equal in happiness to their Creator, yet how far they should fall short of it or what limitations to set them, I had no measure to ascertain: neither could I find a rule to determine whether their happiness was to continue always equal in degree, or to vary and receive interruption at stated intervals. And if this obstacle were removed, still I saw there was an infinite variety of ways by which the same portion of blessing might be conveyed to them: it might be dispensed continually with no trouble or perplexity to the creative power by an immediate operation without the intervention of second causes, in which case they would want only the faculty of perceptivity but have no use for that of activity: or they might be endowed with powers of affecting one another: or if matter were employed, there were a thousand various primary properties with which it might be invested,

vested, and a thousand different orders of succession in which he might move, all equally answering the same purpose. But I could find no preference nor make election among them: for to do this was a pure act which I was incapable of exerting, or of forming a choice without some pre-existent motive to incline me. I could not guide myself by the nature of things, for where there were no things in Being there could be no nature of them.

Then said the Angel, Take that scheme of material nature which thou knowest established in the present universe. As I had all knowledge lent me, I comprehended the whole plan of Providence, all the laws of nature and mazes of fortune, the qualities of substances, their relations and mutual dependencies; and began to attempt a plan similar to that of the old world. So I said, May there be such and so many bodies, so and so placed, with such impulses in particular lines of direction among them, according to the archetypal idea in my mind. And it was so. And I looked forth upon the works that were made, and behold they were not good. For I perceived that the bodies continually colliding, the motion imparted to them would in time be ex-

hausted and the whole reduced to an inactive lump.

Then the Angel said, Why dost not thou provide active creatures to repair the decays of motion from time to time by their energy? But I answered, though wisdom and knowledge be given me, these are not sufficient for the purpose, for I foresee that if good only be allotted to the creatures, they will want a spur to their activity and become careless: but wisdom instructs me not what proportion of evil to intermingle, nor what quarters to assign it; yet goodness forbids there should be any more dispersed than absolutely necessary.

I had then revealed to me the exact quantity of evil indispensable, the several forms of Being and stages of life to be passed through, which of them were to be exempt from evil, which wholly overwhelmed with it, and which to contain a mixture of it with good; and that moral evil was to be made the road to natural. Nevertheless, I could not proceed, for though goodness was satisfied by the small quantity of evil sprinkled among the good throughout the whole, and equity was satisfied because the creatures, taking their turn in rotation through the several forms of Being, would receive their exact share both

both of the good and of the evil, yet wisdom had no sufficient materials to begin upon. For it was not enough, there were stations provided to receive such a number of percipient creatures, but an allotment must be made of each person to his particular station: among the rational creatures there were mechanics, and soldiers, and scholars, but who was to be the mechanic, the soldier, or the scholar? Here was no proceeding in the gross, a distribution and choice of persons for stations was necessary, yet was there no diversity of objects to determine the judgment in making the choice: for there was neither merit nor demerit in non-entities, nor difference of qualities rendering them fitter for one station rather than another. Neither could I begin with the next that came to hand, for their was neither proximity nor distance among Nothings; they were all equally near and equally ready to be produced into Being in this place or that by creative Power. Thus I remained at a full stand, and while I stayed, the half-formed world was wiped away, mine illuminations were taken from me, and I was reduced again to mine ordinary narrow understanding, that of a common man.

Then spake the Angel unto me in a loud and majestic tone which sunk deep into mine ears. Hear, O Man, and remember. This

This is the lesson thou art to learn from all that has passed in thy sight. Thou couldest not create a world even though thou hadst almighty power and infinite wisdom to assist thee: for power and wisdom do not suffice for the work of creation. Power performs nothing without wisdom to direct it, nor does wisdom direct without goodness to move it: goodness may permit, but will not produce evil, and wisdom is not herself without pre-existent ideas to contemplate. Yet was there nothing prior, nothing external to God, which might exhibit ideas, but they were suggested by his own pure act precedent to themselves and to the wisdom they generated. Thou beholdest the works of nature and readest therein characters of power, wisdom, and goodness, greater than imagination can fully comprehend: but know, there are other Attributes whereof thou canst not imagine even a glimpse, yet must acknowledge there are such, because thou seest effects which could not be worked by those whereof thou hast any imagination. The necessity of evil compelleth not the Lord to admit it, for necessity bindeth him not, but his decrees make necessity. He alone can act where no motives are, and choose between things indifferent: he thereby openeth the sources whence wisdom floweth, and beginneth the order

order of succession which she carrieth on: he establisheth the nature of things to be an unalterable rule for his own proceedings, and determineth what shall be absolutely impossible, setting bounds as it were to his own Omnipotence.

The Angel having said this, took me up in his arms and carried me back to my vehicle: he opened a cleft in my head, which having applied against the rent in the vehicle, he injected me thereinto and closed up the rent; so that the bag became entire as before disruption.

72. Immediately I thurst out my head, and opening my eyes saw my patron Locke with the rest of vehicles standing round me in amazement: for though they had suspected I should return because they saw my vehicle did not begin to unravel like a torn stocking, as it seems was usual upon disruptions, yet extraordinary events are apt to surprise even when expected. They were very curious and importunate with me to relate the particulars of all I had seen, and give them an account of the country they hoped in due time to inhabit themselves. Indeed, says I, Gentlemen, I do not know what you mean, I relate particulars! All I know is, that you told me just now I was going to

be

be advanced, and I thought I felt my vehicle tear asunder, but to be sure it was only fancy, for I find myself sound and whole now. I believe I may have been in a fainting fit for a moment. A moment! said they, why you have been gone from us a full week of our time, and must have seen a great deal in that space. Why will not you communicate? had you any injunctions to secresy? I vowed and protested upon the honest word of a Search that I had nothing to tell them, and that if I had been gone so long as they talked of, I remembered not a tittle of what had passed in that interval. But they would not believe me, and some said they would get it out, whether I would or no, by the sentient language: so I was in great danger of having a rape committed upon my imagination, if Locke had not interposed. Good friends, says he; you will not get any thing of him by violence: I know my cousin better than you do: he has such an abundance of odd thoughts, and jumbles them so together in motly mixtures of serious and trifling, abstruse and familiar, earnest and jest, that you will not discern any thing he knows or thinks of if he has not a mind to let you. But I know he will be sincere and open with me. Come, Ned, make a flat side. I did

so,

so, and after a short application of his vehicle thereto he assured them that I had really no information to give them. Besides, says he, consider, he went from hence a naked spirit, without any corporeal organs or tablet of memory to retain the traces of what he might see during his absence. Locke's authority satisfying the company that there was nothing to be learned from me, they dispersed about upon their several occasions and left us alone.

73. When they were gone I observed to Locke that there seemed to be a variety of brogues among them: some spoke in a kind of guttural pronunciation, others as if they had been singing.—Can it be, says I, that the Americans and Chinese find their way hither?—Can it be, says he, that you are so narrow minded as to doubt it?—Has not the story of Cornelius the centurion convinced you, that whoever fears God in any nation finds favour in his sight? He gives to every man the lights necessary for discovering to him the duties he requires at his hands, but men make their own fortunes by the manner in which they use them. There are even of our line of the Searches to be found among the uninstructed and the savage. Those who come with fewer improvements,

find

find no inconvenience in the want of them, for every thing lies here in common: we look upon our talents as deposited with us for the public service, and that our neighbours have an equal property in them with ourselves, therefore such as have them do not endeavour to enslave or overreach such as have them not, but employ them to procure their advantages and enjoyments equally with their own.

But it is time you should think of returning to your body again: the day has appeared some time upon your hemisphere, and if you should stay beyond your usual hour of rising, it will put your family in an uproar; they will think you defunct in earnest, and finding your vital motions continue but no signs of sensation, they will send for Doctors and Surgeons to wrap you in blisters and scarify you all over.—But, says I, may not your clocks go too fast?—Could not we take a little turn first somewhere or other to see more of the country?—What, says he, then you do not care to leave it?—But we do not go by clocks—I see the earth yonder, though you cannot, posting away before us; the verge of night is already gotten beyond the British Islands.—Well, says I, since it must be so, here is my arm: but I go half reluctantly,

tantly, for I like this place so well I could be glad to live here always; and yet methinks I should want to see my girls again. So he took hold of my arm.—But, says he, you shall take a sip of Ambrosia first to fortify you for the journey, for we shall find damps and foggy vapours when we come down into the atmosphere.

He led me directly to the ambrosial streams, where having drank my fill, we pushed forward to overtake the terraqueous globe, which we did with as much ease as a waggoner, having stopped at an alehouse door to wet his whistle, runs after his creeping team. We took a little compass to avoid lengthening our way through the atmosphere by passing it aslant: this obliged us to cross a part of the shadowy cone of night. In one place of this dark region I heard a most dismal howlings, shrieks and clamours, of all grating kinds. Pray, says I, what makes those hideous noises? It seems as if a thousand people were cutting one another's throats.—Says he, it is a parcel of the unhappy vehicles vexing and plaguing one another.—Oh! says I, for heaven's sake let us keep out of their way. If I should meet with another Borgia among them what would become of me?—So I will, says he, not upon our own account, for I should

not scruple pushing through the midst of them for any hurt they could do us, but the sight of our people encreases their torment, stirring up their envy, remorse, and despair. So out of compassion to them we went round just enough to escape their observation, and very soon emerged into light. When we came into the zenith of the great Metropolis of commerce, we shot directly downwards like a falling star, Locke making the nucleus and myself the trail.

74. In our passage through the atmosphere I diverted myself with observing the variety of different particles, metallic, stony, vitreous, ligneous, vegetable, aqueous, and sulphureous, dancing in nimble mazes, never touching but thrusting one another away, as the contrary pole of a loadstone does the magnetic needle. The aqueous, upon the action of heat within them being withdrawn, were overcome by the stronger repulsion of the rest, which forced them together into contact and gathered them into drops. In this state they turned the course of the rays falling upon them obliquely and broke the bars into their constituent balls, which proceeding then with different velocities, if they chanced to overtake one another,

they

they adhered by their flat sides and formed compleat bars again.

Being now arrived at the top of mine own house, the rays we had skated upon would not attend us further, but it pleased me to see how nimbly we glided through the pores of the tiles and timbers, like a snake along the twigs of a hedge. My conductor stopping, asked me what I saw before me. I see, says I, a prodigious torrent rushing directly upwards in circling eddies with a tremulous motion.—That, says he, is the flame of a candle your maid has left upon the stairs while she is gone down to fetch some chips for lighting your study fire. Come, shall we go into it? I can show you something very curious in the inside.—You do not say so! cries I. We shall be burnt up in an instant, like a spider thrown into the kitchen fire. He laughed at my simplicity. No, no, says he, we are not afraid of material fire, if we can keep from inward burnings. The distempered vehicles indeed being debilitated in their limbs, cannot manage them properly: so the agitations of fire beat them about incessantly, giving them as violent smart by outward pulsion as they do the human flesh by stretching the parts of it from within. Then laying hold of me he gave a strong jump, which threw us upon the middle

middle of the snuff. But we could not stand still there a moment, for there was such a commotion of the particles moving in all curvatures about us, that we were forced to shift our quarters every instant: but my conductor managed so dexterously, by pulling or pushing me to the right or the left, that he kept me always in the interstices between them, so that none ever struck directly against me, and though I felt them continually brush my sides, I did not receive the least hurt from them. I observed the corpuscles of light did not touch the substance of the tallow or the cotton, but by their attraction detached particles from them; upon which the corpuscles and particles rolled round one another as their centres, until being drawn off by the attraction of other centres, whereto they chanced to approach nearer, they moved in another circle, and so danced in a kind of figures of eight: but those on the outside, being thrown beyond the attraction of any centre, flew off by their tangential motion in a right line and contributed to form the flame. Look ye here, says Locke, what pretty country-dancings, and hayings, your five million of million of corpuscles make! You see a grain of tallow can do as much as a grain of wax: but I suppose you choose the latter

latter as the genteeler and cleanlier of the two.

75. He then carried me down stairs and set me upoff the floor. Now, says he, you may use your legs: here is ground to tread upon. I was overjoyed to find my feet again. I scampered to and fro like a wild colt upon a common, shifting my little legs faster than a fly upon a table. I found the boards and nails of the floor, and other bodies I met with were not solid, but rather a net-work consisting of very large meshes: neither were the threads between them any other than a finer net-work composed of smaller meshes resembling the shrowds of a ship: I run up and down the wainscot by help of these shrowds without difficulty or danger of falling. There happened a chimney sweeper to pass along the street, whose shrill cries made the strings of the net-works vibrate considerably, but in different directions according to the difference of their position: I found that by means of these vibrations I could jump above twenty times my own height, or throw myself a considerable way from a side of the stiles to some protuberance I could catch hold of in the pannel, like a squirrel vaulting from tree to tree; for after one or two trials I learned to form my fingers into claws, with which

which I could hang to any thing like a cat. Once indeed, attempting a swinging leap from the wainscot to the floor, where the boards, being decayed with too frequent washing, were more porous than ordinary, I did not take my distance exactly, but falling in the middle of one of those wide meshes might have slipped quite through to the chamber below, if there had not chanced to lie a hair across the lowermost mesh of all: this having caught hold of, with a good stout spring I got my feet upon it and presently ran up the side of the pore to my conductor again. I bragged to him how nice this vibration-exercise was for teaching me to walk upon moving ground by taking a certain impulse and direction therefrom, whereby I should learn the sooner to skate upon the solar and stellar rays whenever I returned to ether. He smiled, and, Come, says he, enough of these gambols. Let us proceed to your chamber

We did not go through the key hole, as they say spirits usually do, for that would have been out of the way, but through the chink under the door: yet I held up my head as erect and found as good room over it as a goose in going through a barn. I followed my guide to the right hand or the left, up hill

or

or down, as he led me, still skipping from mesh to mesh with higher bounds than needful, while he walked soberly along the strings.

We clomb a high pinnacle that appeared like the Peak of Teneriffe tapering up to the top, where was a spacious flat big enough for five hundred of us to have danced a Lancashire hornpipe. What are we got upon now? says I.—The point of a pin says he, sticking out of your pillow. But look up over your head and all about ye.—I used to think, quoth I, the world was round: but this is a square world.—It is your bed, says he; the curtains drawn round except one place at the feet.—Good lack! says I, what fools are mankind to terrify themselves with notions of Ghosts throwing open their curtains and staring at them with saucer eyes! A million of us could not stir one of these heavy textures, nor reflect corpuscles of light enow to make the apparition of a flea. But what is that huge mountain over against us, with a monstrous gaping chasm on one side and a great ridge turned this way, from whence issue black streams of fuliginous vapour?—That, says he, is your head, mouth, and nose.—Surprising! says I; Have I lain so many years, like another Enceladus, under the smoking Etna! How could I escape be-

ing suffocated with that load of filth upon my lungs?

Hark! says he, I hear the cocks crow in the stable yard, which is a signal for spirits to depart. So we descended the pinnacle, ran along the pillow, and he conducted me through one of the pores in my head, having first made me cast myself into the form of one of Lewenhoek's animalcules. I had much ado to wriggle along, for it was all sticky and miry, like a Sussex road, with the insensible perspiration which in sleep is more copious. When we arrived at the anterior ventricles he took a hearty leave, wished me a happy return to the vehicular country again, and bid me take my station. I hung back, and with a lamentable groan, Must I, says I, must I lie imprisoned again in that loathsome dungeon?—Prithee! says he, no words. Reverence the Oath, for it is the Oath of Jove. Be ready upon call either to enter the body or quit the body. In matters put within thine own power, use thy judgment and discretion: but when thou seest whither the laws of nature or dispensations of Providence point, revere, resign, and obey. He then beckoned to Gellius, who leaving off writing, I know nothing of what passed afterwards.

76. It was now broad day-light when Somnus, taking off his poppy garland from my temples,

temples, fled away, but with him fled not the visions of the night; for the faithful Gellius had engraven them in strong characters upon the tablet of my memory. I started up full of the wonders I had seen: I turned eagerly to look for the pin, which I found sticking with the point upwards about six inches from my ear. Is this the summit, says I, where Locke and I found so much room to expatiate? And the sides are all smooth and polished. Where are the shrowds by which we ran up and down so easily? I then threw myself upon my back, and was astonished to see the bed tester so near me, which I beheld just before like the spacious canopy of heaven stretched over me at an immense distance. I tried to get a little nap for composing my spirits, but could not. So I got up, and after breakfast finding my head too confused for application of any kind that morning, I sauntered it away at auctions, coffee-houses, and the like. I could not help every now and then talking to myself, muttering out some mysterious words, such as Euridice, vehicles, Cæsar Borgia, riding upon the rays, and complained of my chocolate for not being so good as Ambrosia: till I perceived people began to look strange upon me and suspected that, as the French Ambassador said of Monsieur D'Eon, I had a little alie-

nation of the organs. This made me more circumspect and careful to bring myself down to sublunary affairs to save the credit of my intellects; for had I run Opera-mad, or Assembly-mad, or Methodist-mad, or Election-mad, I might have found companions enow to keep me in countenance, but such a peculiar species of insanity as Vehicle-madness must have been pointed at by every body; so I strove hard against the impulse, and with a little practice came to think and talk again like other folks.

I then proceeded with diligence to reduce into writing the records engraven by Gellius upon my sensory, and think I have done it very exactly, not omitting the minutest circumstance that could be discerned clearly; so if there be any thing in them not consonant to the truth of facts, it is his fault for misleading me. It vexed me that I could not recover his interlineations, for by the imperfect notion I have of them, I imagine they tend to harmonize Reason with Religion, and to show that objects rightly placed either in the light of Nature or of the Gospel, will appear the same in substance and quality, varying only by a difference of colours, suited respectively to the different optics of the man of speculation or the man of business. I thought it very obliging in my kind patron

to

to lead me through a variety of entertaining as well as instructive scenes: no doubt he had the latter principally in view, but interspersed the former to make the others the more palatable to my compatriots, who it must be owned are too squeamish in their taste, and fonder of the toothsome than the wholesome. I hope they will not frustrate his good intentions by doing like the children when one sweetens a pill for them, who suck off the sugar and spit out the medicine.

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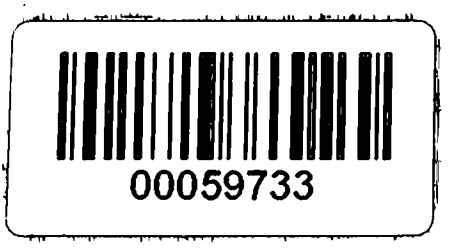
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